

KENWOOD

KT-34 KT-34L

STEREO SYNTHESIZER TUNER

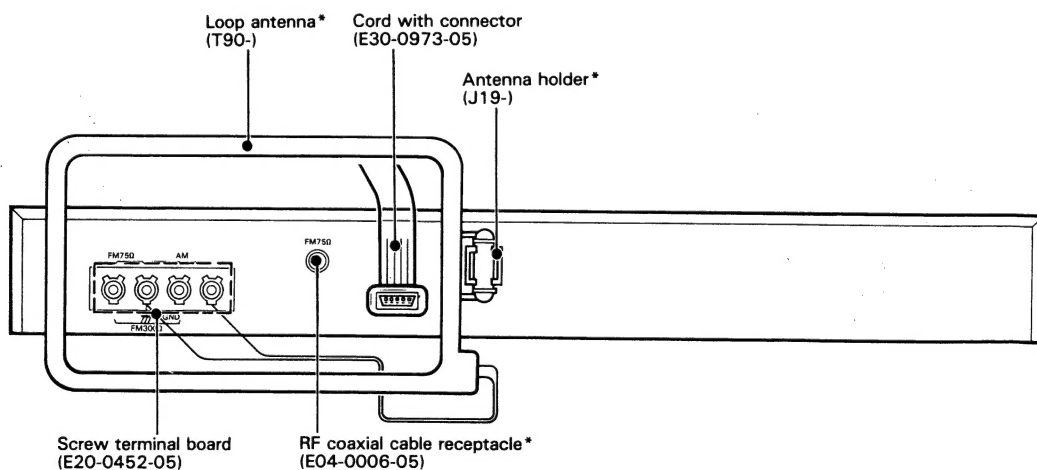
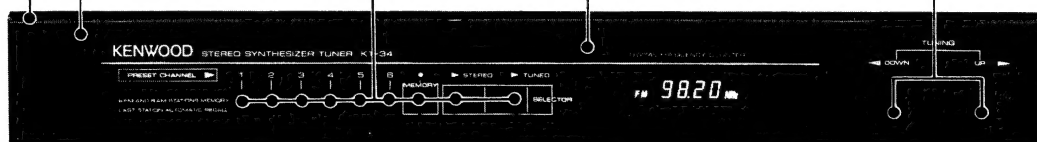
Metallic cabinet
(A01-1396-01) : S
(A01-1395-01) : B

Panel
(A20-4269-01) : S
(A20-4268-01) : B

Knob (Button)
(K29-1940-04) × 9

Dressing plate*
(B03-)

Knob (Button)
(K27-1465-04) : S × 2
(K27-1446-04) : B × 2



Note: When doing service of KT-34, KT-34L, or KX-34, be sure to have the customer bring the KA-34 or use the DC power supply.

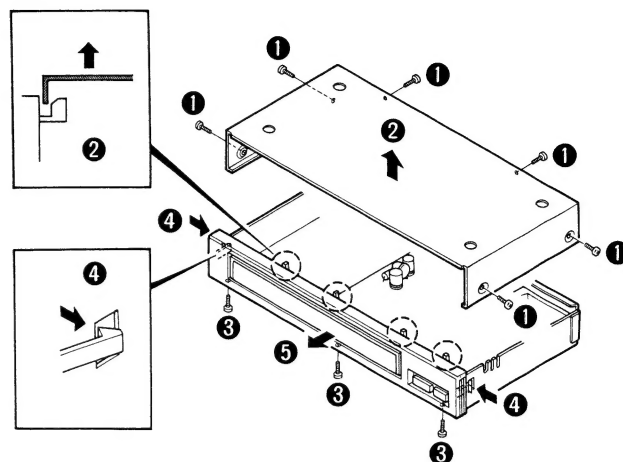
* Refer to Parts List on page 20.
Photo is KT-34 (Black version).
S: Silver version
B: Black version

DISASSEMBLY FOR REPAIR

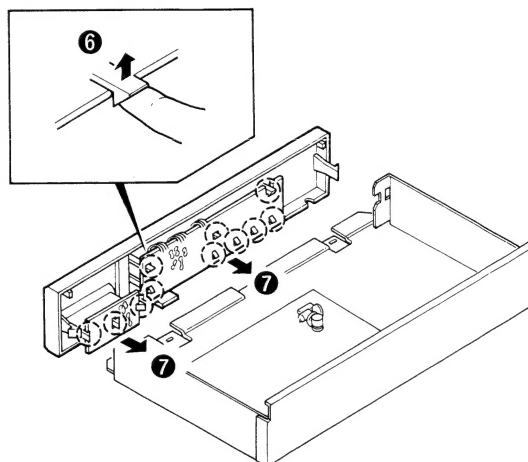
1. Remove 6 screws from the metallic cabinet and lift the metallic cabinet straight upward (1, 2).

(Note) Be aware that the metallic cabinet is hooked to the projections on the panel.

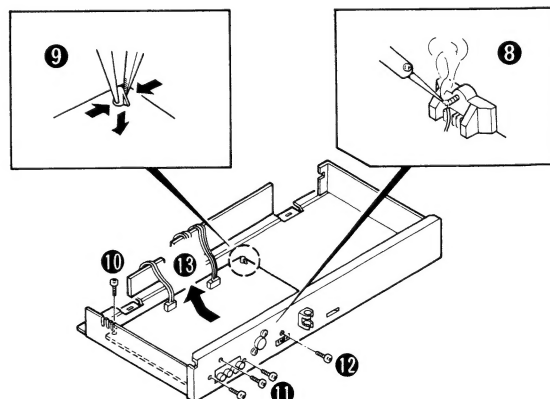
2. Remove 3 screws at the bottom of the panel (3).
3. Push the pawls at both sides of the panel and pull the panel forward (4, 5).



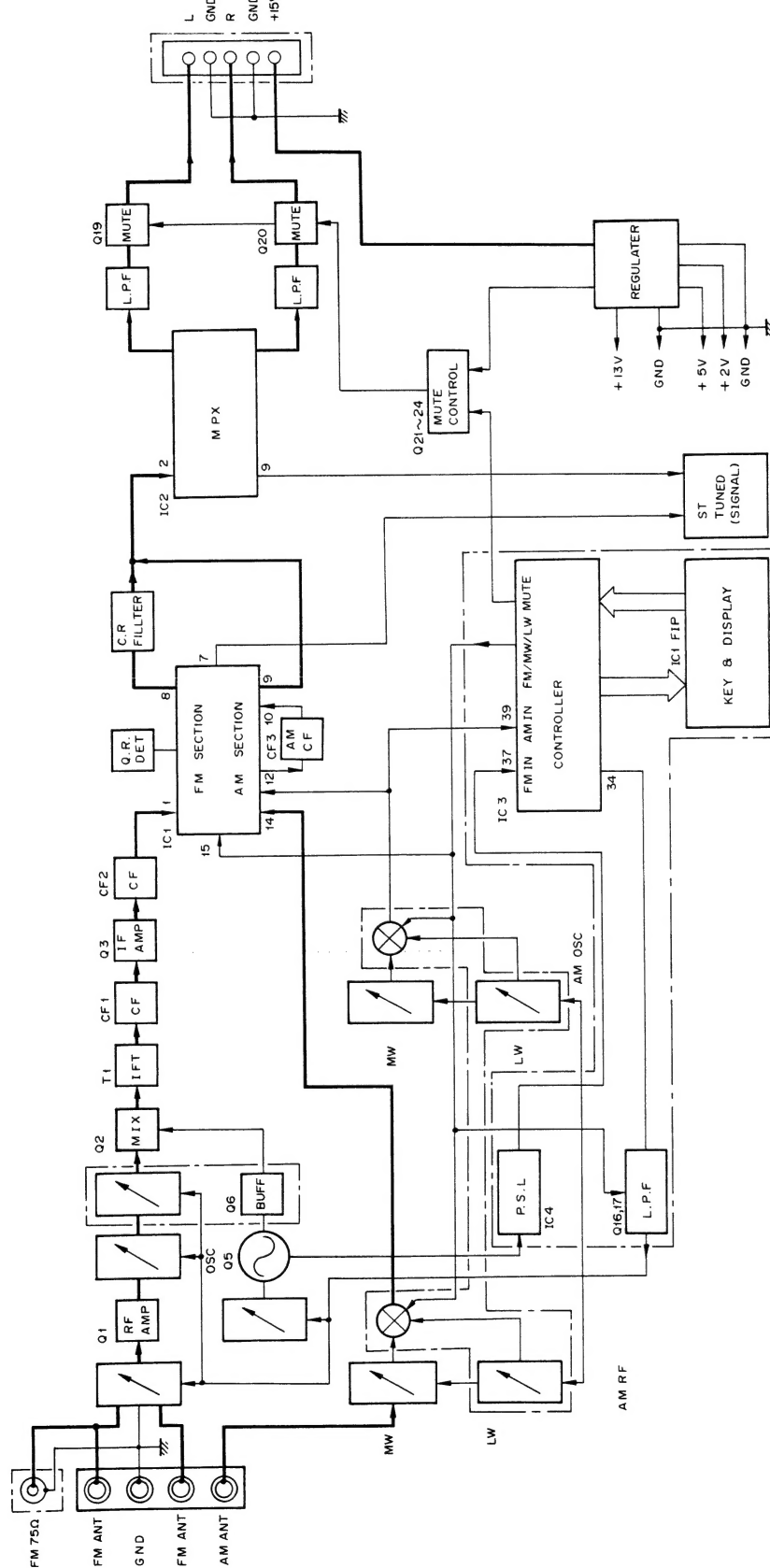
4. To remove the pc board from the rear side of the panel, release the hooks from the pc boards and pull the pc boards straight backwards (6, 7).



5. For removal of tuner pc board, first unsolder the lead to the screw (8).
6. Release the pc board from the pc support and remove 1 screw on the pc board (9, 10).
7. Remove 3 screws from the antenna terminal board (11) and remove 1 screw from the connector (12).
8. Slide the pc board out as shown (13).



BLOCK DIAGRAM



CIRCUIT DESCRIPTION

Tuner unit (X05-2870-10 and X05-2880-10)

Components	Functions	Operations
IC1	FM/AM system IC	FM IF amp/detect/control, AM mix/IF amp/detect
IC2	MPX	MPX demodulation
IC3	DTS controller	Controls the PLL synthesizer, display, etc.
IC4	FM OSC divider	Divides the FM OSC to 1/30 or 1/32.
Q1	FM RF amp	
Q2	FM MIX	
Q3	FM IF amp	
Q4	FM OSC buffer	
Q5	FM OSC	
Q6	FM OSC buffer	
Q7	Switch	ON in FM mode to adjust the FM signal level
Q8	Switch	ON in FM to set the IC to FM mode.
Q9	Switch (MW/LW switching)	ON in MW to operate MW OSC.
Q10	Switch (MW/LW switching)	ON in MW to select the MW RF signal.
Q11	Switch (MW/LW switching)	ON in LW to select the LW RF signal.
Q12	Switch (MW/LW switching)	ON in LW to operate LW OSC.
Q13	AM OSC amp	Amplifies the AM OSC signal to supply it to DTS.
Q14	Inversion amp	Turns ON in LW to turn OFF Q15.
Q15	Switch (FM, MW — LW switching)	ON in FM and MW, OFF in LW so that the response of DC amp is switched.
Q16, Q17	PLL DC amp	The darlington connection of Q16 and Q17 forms a high input impedance, high-gain amplifier.
Q18	Composite buffer amp	Turns the composite signal line to low impedance.
Q19, Q20	Muting	ON when muting.
Q21	Power mute drive	Turn ON when Q33 turns OFF, and becomes the muting drive source.
Q22	Muting logic composition	Synthesizes the power mute and DTS mute signals.
Q23, Q24	Mute drive	Drive Q19 and Q20.
Q25, Q26	Switch (AM/FM display switching)	Turn ON in AM modes to supply power for the kHz/MW/LM indicator circuit.
Q27	LW display driver	Turns OFF in LW so that "LW" is displayed using high voltage of the collector.
Q28	MW display driver	Turns OFF in MW so that "MW" is displayed using high voltage at the collector.
Q29, Q30	50 kHz display driver	Drives the display of "50 kHz" when displaying the FM frequency.
Q31, Q32	Switch (FM display)	Turn ON in FM to display FM and MHz, and supplies power to the 50 kHz display circuit.
Q33	Grid controller, inhibit	Slow-ON fast-OFF circuit for preventing erroneous lighting of display tubes when switching power ON/OFF. The DTS inhibit signal is also generated by dividing the collector voltage.
Q34, Q35,	Regulated power	
Q36	Supply circuit	
Q37	5.6 V regulated power supply circuit	

CIRCUIT DESCRIPTION

Components	Functions	Operations
D1 – D3	RF tuning varactor diodes	
D4	OSC varactor diode	
D5A	MW RF tuning varactor diode	
D5B	MW OSC varactor diode	
D6A	LW RF tuning varactor diode	
D6B	LW OSC varactor diode	
D7	Switch (VCO killer)	Turns ON in MW to stop the operation of the PLL MPX VCO.
D8	Switch (VCO killer)	Turns ON in LW to stop the operation of the PLL MPX VCO.
D9	Protector	Prevents the reverse voltage damage between the base and emitter of Q21.
D10	Discharge circuit	When power is switched OFF, discharges C96 to turn Q21 ON immediately.
D11	Reverse current	Prevents the discharge of the DTS backup power source.
D13	Clamper	Clamps the Q33 collector voltage and specifies the DTS inhibit voltage.
D14	Reference voltage zener diode	6.2 V
D28	Clamper	Prevents damage to circuit due to high-voltage static electricity.

CIRCUIT DESCRIPTION

STATIC FM/AM (MW)/LW 3-BAND DIGITAL TUNING SYSTEM LSI

The TC9157AP is a system LSI comprising one chip of PLL circuit controller for PLL synthesizer type digital tuning system.

The TC9157AP is used as a 3-band tuner in South Africa and Europe. There are the following versions, based on different frequency display systems.

TC9157AP: Digital display by 7-segment display unit by adding TD6301AP.

Applied to South Africa, U.S.A. and Europe.
(FM/AM 2-band in U.S.A. and FM/MW/LW 3-band in South Africa and Europe)

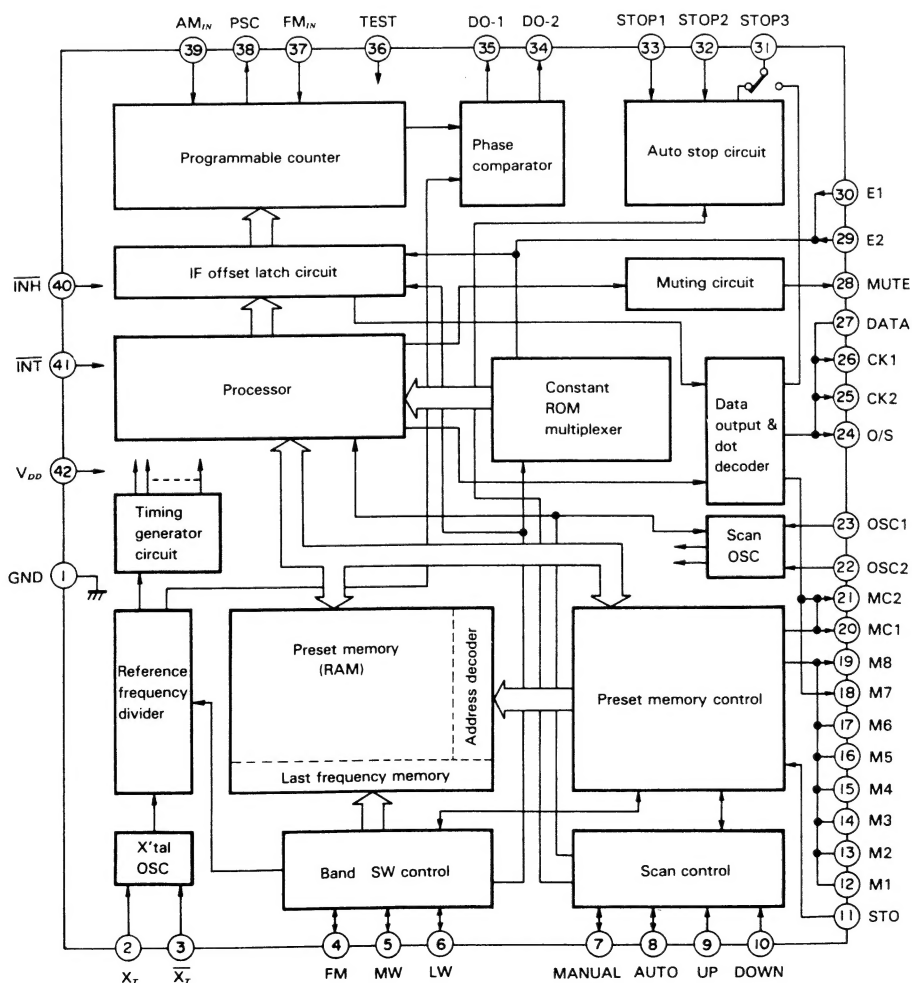
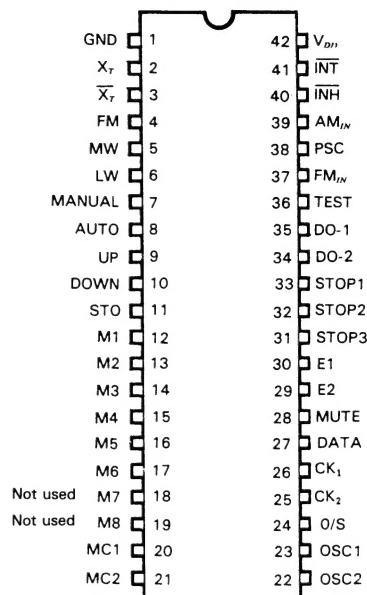
Operation keys, frequency display and operation display are static type.

Preset memory of 12 stations is contained. Last frequency memory and last channel memory of each band are also contained.

In FM mode, a swallow counter is formed in combination with the TD6104P prescaler, making the reference frequency 25 kHz.

TC9157P

Pin connection



CIRCUIT DESCRIPTION

Functions of Each Terminal (TC9157P)

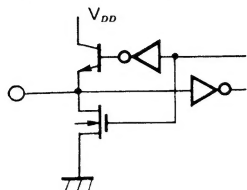
* Make indicates Europe models.

Pin No.	Symbol	Name	Function	Remarks
2	X _T	Crystal oscillator	Connect crystal for reference frequency of 7.2 MHz	Feedback resistance contained
3	X _T			
4	FM	FM band selection input	Manual reset type. Switch FM, MW and *LW bands.	A
5	AM (MW)	MW band selection input		
*6	LW	LW band selection input		
7	MANUAL	Manual tuning mode selection input	Manual reset type. Switch manual mode at UP/DOWN channel selection.	A
8	AUTO	Auto search tuning mode selection input	Not used.	A
9	UP	UP control key input	UP/DOWN channel selection made by the push key.	B
10	DOWN	Down control key input		
11	STO	Memory store instruction input	With this input, preset memory is set to write condition.	A
12-17	M1-M6	Preset memory channel selection input	Control writing and reading of internal 12-channel preset memory in combination with MC1 and MC2 inputs.	A
20	MC1	Memory control input	Set 12-channel preset memory to random system of FM/AM (MW/LW).	C
21	MC2			
22	OSC2	AM oscillator terminal	Connect C and R of the oscillator to determine scan speed at AM search.	—
23	OSC1	FM oscillator terminal	Connect C and R of the oscillator to determine scan speed at FM search.	—
24	O/5	FM 50 kHz output	Output indicating 50 kHz and step in FM band in South Africa and Europe. "H" level at 50 kHz.	D
25	CK1	Receiving frequency data serial output	Output the serial data and timing clock to be sent to TD6301AP driver for digital display of receiving frequency.	D
26	CK2			
27	DATA			
28	MUTE	Muting signal output	"H" level when muting signal is output.	D
29	E2	Area selection input	Designate each area, U.S.A., Europe and South Africa.	E
30	E1			
31	STOP3	AM-IF signal input	Not used.	F
32	STOP2	Auto search stop signal input	Not used.	E
33	STOP1	Scan speed slow input		
34	DO-2	Phase comparator output	Two tri-state buffer outputs are output in parallel from one phase comparator.	G
35	DO-1			
36	TEST	Test terminal	Not connected.	B
37	FM _{IN}	FM programmable counter input	Output of TD6104P prescaler is connected.	F
38	PSC	Prescaler control output	Control frequency dividing of 1/30 and 1/32 of TD6104P prescaler.	D
39	AM _{IN} (MW _{IN})	AM (MW) programmable counter input	Enter AM (MW) station oscillating signal.	F
40	INH	Inhibit input	Normal operation at "H" level and inhibit at "L".	E
41	INT	Initialize input	Normal operation at "H" level and internal condition is initialized at "L".	E
42	V _{DD}	Power application terminal		
1	GND			

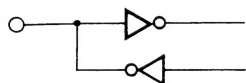
CIRCUIT DESCRIPTION

Input/output equivalent circuit

A. I/O type with built-in LED driver of bipolar transistor



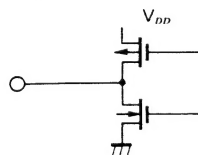
C. C-MOS I/O type



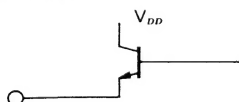
E. C-MOS input (without pull-up/down resistor)



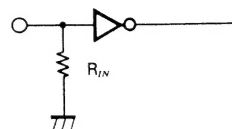
G. Tri-state output



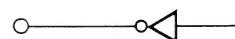
I. LED driver output of bipolar transistor



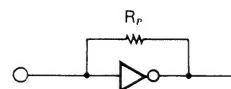
B. C-MOS input with pull-down resistor



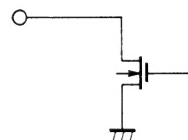
D. C-MOS output



F. With built-in input amplifier



H. LED driver output of Nch MOS



Channel select function

- 1) Manual tuning with UP/DOWN key
 - o 1 step/1 push step tuning
 - o Fast tuning by pressing key continuously
- 2) Preset tuning by reading memory

Preset memory and last frequency memory

- 1) 12-station preset memory is contained.
 - o 12-stations, regardless of the selected band FM or AM (MW/LW) can be preset at random.
- 2) Last frequency memory is provided for each band of FM/MW/LW.
 - o The last frequency memory is capable of storing preset memory channel number together with frequency data. (Last channel memory function)
- 3) All memories consist of static type C-MOS RAM.

Display function

- 1) All displays are static type.
- 2) LED driver is provided for displaying bands, MANUAL/AUTO modes and memory channels.
- 3) Receiving frequency is displayed in the digital system by connecting TD6301AP.

Inhibit function

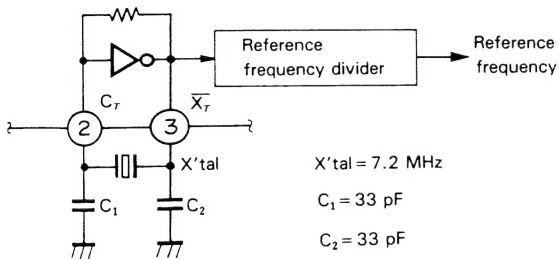
All input/output operations are inhibited by this function, and LSI operations including OSC oscillation are completely stopped. With this function, the receiving state including the memory contents is backed up for a long time by the capacitor when the power of the set is off.

CIRCUIT DESCRIPTION

PLL SECTION

Reference frequency and crystal oscillator

- Oscillation frequency of the crystal oscillator is divided to make reference frequencies of 9 kHz or 10 kHz for MW and 1 kHz for LW.
- Crystal oscillation frequency is 7.2 MHz.
- The crystal oscillator contains a self bias amplifier and consists of a crystal and a capacitor, as shown below. Oscillation is stopped in inhibit state.



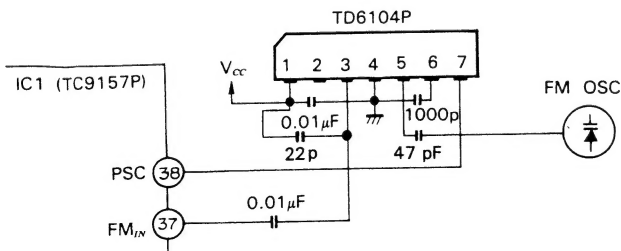
Mode	Reference frequency	Remarks
FM	25 kHz	At FM band
MW 9	9 kHz	At separation of MW 9 kHz
MW 10	10 kHz	At separation of MW 10 kHz
LW	1 kHz	At LW band

Programmable counter

Programmable counter differs in the circuit configuration in FM and AM(MW/LW) modes.

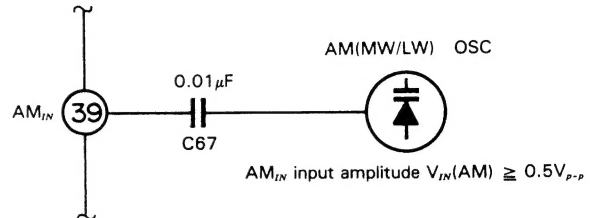
1) FM programmable counter

In FM mode, the swallow count system is employed in combination with TD6104P prescaler. So, reference frequency is 25 kHz in this mode. Connection with prescaler is shown below.



2) AM programmable counter

Direct dividing system is employed in AM (MW/LW) mode. AM station signal is directly applied to AM_IN terminal.

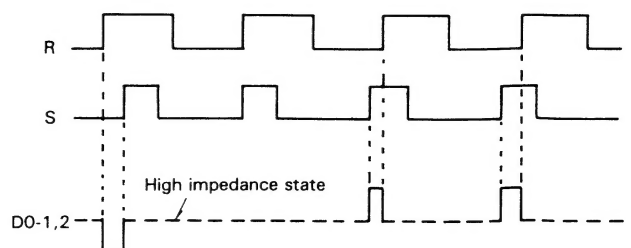
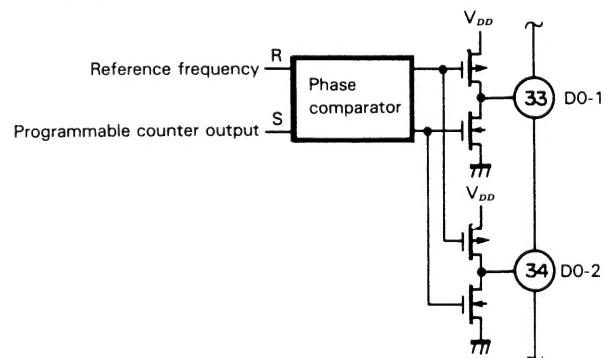


- Either FM_IN or AM_IN terminal contains an amplifier in the input circuit, and a signal is entered through capacitor coupling.
- PSC output level is low in inhibit state and in AM (MW/LW) mode.

Phase comparator

The phase comparator is the part used for comparing phases of the reference frequency and programmable counter output. It controls VCO through the low-pass filter so that frequencies and phases of these two signals coincide with each other.

- Two tri-state buffers DO-1 and DO-2 are output in parallel from one phase comparator. This permits use of two sets of low-pass filter without switching them.
- Both DO-1 and DO-2 are kept at low level in inhibit state.



4) DO output timing diagram

CIRCUIT DESCRIPTION

CONTROLLER

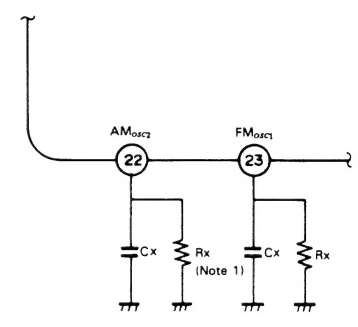
- Determining OSC1/OSC2 oscillation frequencies**
 OSC1 and OSC2 are C and R connection terminals for one-terminal type oscillator. Frequencies of these terminals are used to determine scan speed in manual fast tuning or auto search.
 OSC1 and OSC2 are used independently for FM and AM (MW) respectively. The OSC1 oscillation frequency is also used to determine continuous key pressing time for manual fast tuning, muting signal output time and automatic stored state reset time.
 Both OSC1 or OSC2 stops oscillation when not necessary.

$$\text{Oscillation frequency } f_{osc} \approx \frac{1}{0.7 C_x R_x} (\text{Hz})$$

$$f_{osc1} = 30 \text{ Hz (FM)}$$

$$f_{osc2} = 25 \text{ Hz (AM)}$$

(Note 1) $R_x = 56 \text{ k}\Omega$ (AM), $47 \text{ k}\Omega$ (FM)
 $C_x = 1.0 \mu\text{F}$ (AM, FM)



Scan speed (Fast tuning/Auto search)	At FM	$f_s (\text{FM}) = 1/2 \cdot f_{osc1} (\text{Step/sec})$	(Example) When $f_{osc} = 20 \text{ Hz}$	10 (step/sec)
	At AM (MW/LW)	$f_s (\text{AM}) = 1/2 \cdot f_{osc2} (\text{Step/sec})$		10 (step/sec)
Continuous key pressing time for manual fast forward		$T_{SCAN} = 14/f_{osc1} (\text{sec})$		0.7 (sec)
Automatic stored state reset time		$T_{STO} = 224/f_{osc2} (\text{sec})$		about 11 (sec)
Muting signal output time	short	$T_{MUTE} (S) = 7/f_{osc1} (\text{sec})$		0.36 (sec)
	long	$T_{MUTE} (L) = 15/f_{osc1} (\text{sec})$		0.75 (sec)

(Note) f_{osc1} : OSC1 oscillation frequency
 f_{osc2} : OSC2 oscillation frequency

E1	E2		Destination
0	0		South Africa
1	0		Europe
0	1	USA	MW 9 kHz separation
1	1		MW 10 kHz separation

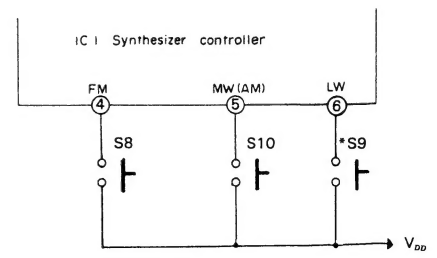
Selection of receiving bands

- Bands are switched by inputs of FM, MW and LW terminals. Three-band of FM/MW/LW in versions for South Africa and Europe, and two-band of FM/AM (MW) in versions for Canada and U.S.A.
- Inputs of FM, MW and LW are of the mutual reset type and "H" level active.
 - Input by multiple key depression is not accepted, and muting level becomes high.
 - LW input is not accepted in versions for Canada and U.S.A.

Designation of destinations, Canada, U.S.A., Europe and South Africa

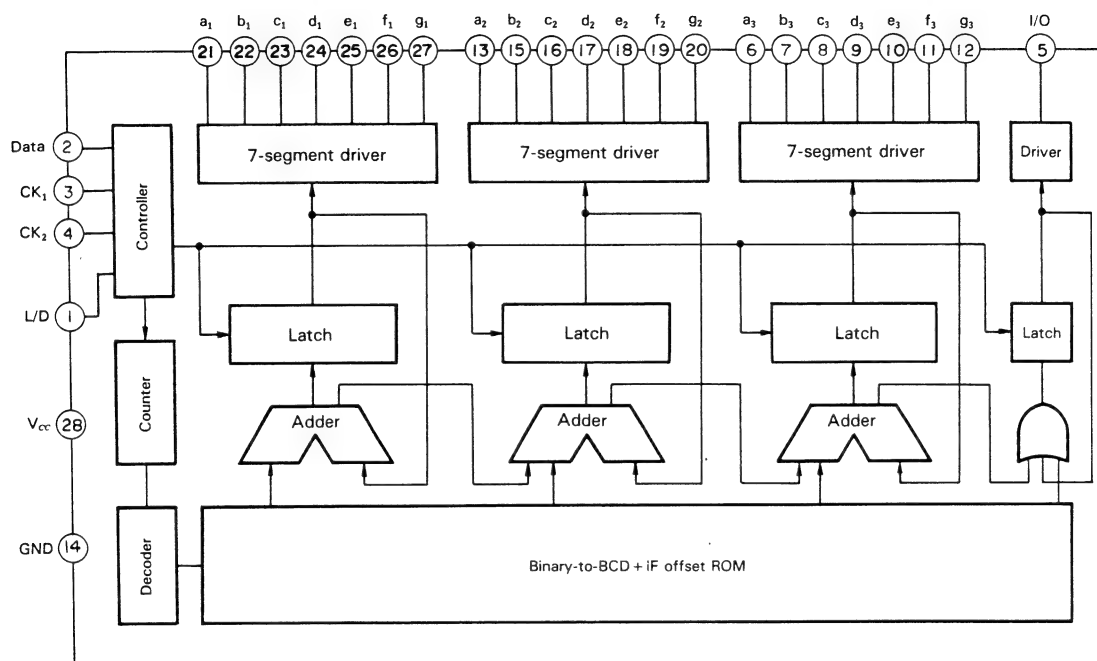
E1 and E2 terminals are used to designate the destination, Canada, U.S.A., Europe and South Africa.

- Designation of U.S.A. permits selection of 9 kHz/ 10 kHz separation of AM band.
- With $INH = "L"$ level, E1 and E2 inputs inhibit reading and hold the previous state.



CIRCUIT DESCRIPTION

Block diagram: TD6301AP (IC1; FIP driver)



Function of each connection

Pin No.	Name	Function
1	L/D	Output state switching input terminal. Switch the output state according to the display unit.
2	DATA	Receiving frequency data input terminal. The data is serially input by the system controller LSI.
3, 4	CK1, CK2	Receiving frequency data input control timing input terminal. Transferred simultaneously with the data by the system controller LSI.
5	I/O	Segment driver terminal. Display the 100 MHz digit at FM and 1000 kHz digit at AM.
6 — 12	a3 — g3	7-segment driver output terminal. Display the 10 MHz digit at FM and 100 kHz at AM.
13, 15 — 20	a2 — g2	7-segment driver output terminal. Display the 1 MHz digit at FM and 10 kHz digit at AM.
21 — 27	a1 — g1	7-segment driver output terminal. Display the 100 kHz digit at FM and 1 kHz digit at AM.
14	GND	GND terminal
28	V _{cc}	Supply voltage apply terminal

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION Unless otherwise specified, the individual switches should be set as following: SELECTOR: FM MODE: FM MODE/MUTING ON							
1	BAND EDGE (1)	—	Connect a DC voltmeter between TP1 and TP2(GND).	87.5MHz	L7	2.5V	(a)
2	BAND EDGE (2)	—	Connect a DC voltmeter between TP1 and TP2(GND).	108.0MHz	TC1	8.0V	(a)
Repeat alignments 1 and 2 several times.							
3	RF ALIGNMENT	(A) 98.0MHz 1kHz, ±75kHz dev	(B)	MONO 98.0MHz	L2,4,5	Maximum amplitude and symmetry of the oscilloscope display.	
4	DISCRIMINATOR	(A) 98.0MHz 1kHz, ±75kHz dev 60dB(ANT input)	(B)	MONO 98.0MHz	T2	Minimum distortion.	(b)
5	VCO	(A) 98.0MHz 0 dev 60dB(ANT input)	Connect a 330kΩ resistor to TP11. Connect a frequency counter to the resistor via an AC voltmeter.	98.0MHz	VR1	19.00kHz	(c)
6	SEPARATION (E,T only)	(C) 98.0MHz 1kHz, ±40kHz dev Selector:L Pilot: ±6.75kHz dev 60dB(ANT input)	Rch	98.0MHz	VR2	Minimum crosstalk.	
AM-MW SECTION Keep the AM loop antenna installed. SELECTOR: MW							
(1)	BAND EDGE (1)	—	Connect a DC voltmeter between TP1 and TP2(GND).	600kHz (603kHz)	L9	1.5V	(a)
(2)	BAND EDGE (2)	—	Connect a DC voltmeter between TP1 and TP2(GND).	1600kHz (1602kHz)	TC3	8.0V	(a)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (1)	(D) 630kHz 400Hz, 30% mod	(B)	630kHz	L11	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1440kHz 400Hz, 30% mod	(B)	1440kHz	TC2	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							
AM-LW SECTION Keep the AM loop antenna installed. SELECTOR: LW							
(1)	BAND EDGE (LW)(1)	—	Connect a DC voltmeter between TP1 and TP2(GND).	153kHz	L10	1.5V	(a)
(2)	BAND EDGE (LW)(2)	—	Connect a DC voltmeter between TP1 and TP2(GND).	281kHz	TC5	8.0V	(a)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (LW)(1)	(D) 162kHz 400Hz, 30% mod	(B)	162kHz	L12	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (LW)(2)	(D) 270kHz 400Hz, 30% mod	(B)	270kHz	TC4	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION Unless otherwise specified, the individual switches should be set as following: SELECTOR: FM MODE: FM MODE/MUTING ON							
1	BAND EDGE (1)	—	Connect a DC voltmeter between TP1 and TP2(GND).	87.5MHz	L7	2.5V	(a)
2	BAND EDGE (2)	—	Connect a DC voltmeter between TP1 and TP2(GND).	108.0MHz	TC1	8.0V	(a)
Repeat alignments 1 and 2 several times.							
3	RF ALIGNMENT	(A) 98.0MHz 1kHz, ±75kHz dev	(B)	MONO 98.0MHz	L2,4,5	Maximum amplitude and symmetry of the oscilloscope display.	
4	DISCRIMINATOR	(A) 98.0MHz 1kHz, ±75kHz dev 60dB(ANT input)	(B)	MONO 98.0MHz	T2	Minimum distortion.	(b)
5	VCO	(A) 98.0MHz 0 dev 60dB(ANT input)	Connect a 330kΩ resistor to TP11. Connect a frequency counter to the resistor via an AC voltmeter.	98.0MHz	VR1	19.00kHz	(c)
6	SEPARATION (E,T only)	(C) 98.0MHz 1kHz, ±40kHz dev Selector:L Pilot: ±6.75kHz dev 60dB(ANT input)	Rch	98.0MHz	VR2	Minimum crosstalk.	
AM-MW SECTION Keep the AM loop antenna installed. SELECTOR: MW							
(1)	BAND EDGE (1)	—	Connect a DC voltmeter between TP1 and TP2(GND).	600kHz (603kHz)	L9	1.5V	(a)
(2)	BAND EDGE (2)	—	Connect a DC voltmeter between TP1 and TP2(GND).	1600kHz (1602kHz)	TC3	8.0V	(a)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (1)	(D) 630kHz 400Hz, 30% mod	(B)	630kHz	L11	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1440kHz 400Hz, 30% mod	(B)	1440kHz	TC2	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							
AM-LW SECTION Keep the AM loop antenna installed. SELECTOR: LW							
(1)	BAND EDGE (LW)(1)	—	Connect a DC voltmeter between TP1 and TP2(GND).	153kHz	L10	1.5V	(a)
(2)	BAND EDGE (LW)(2)	—	Connect a DC voltmeter between TP1 and TP2(GND).	281kHz	TC5	8.0V	(a)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (LW)(1)	(D) 162kHz 400Hz, 30% mod	(B)	162kHz	L12	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (LW)(2)	(D) 270kHz 400Hz, 30% mod	(B)	270kHz	TC4	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							

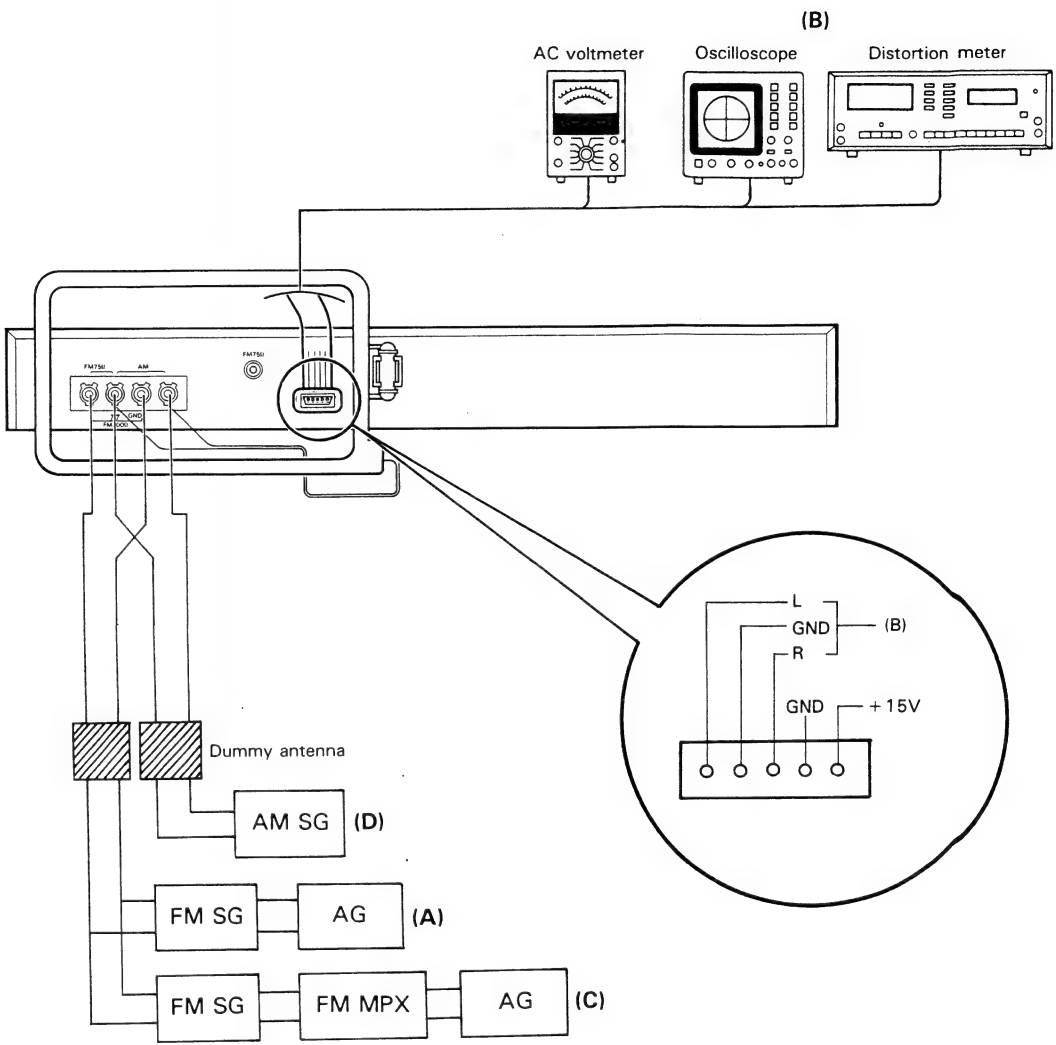
REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF Sauf en cas d'indications spéciales, régler chaque commutateur comme suit: SELECTEUR: FM MODE: FM MODE/MUTING ON							
1	BORD DE BANDE (1)	—	Relier un voltmètre CC entre les TP1 et TP2(GND).	87,5MHz	L7	2,5V	(a)
2	BORD DE BANDE (2)	—	Relier un voltmètre CC entre les TP1 et TP2(GND).	108,0MHz	TC1	8,0V	(a)
Répéter les points 1 et 2 plusieurs fois.							
3	ALIGNEMENT HT	(A) 98,0MHz 1kHz.±75kHz dév	(B)	MODE: MONO 98,0MHz	L2.4.5	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
4	DISCRIMINATEUR	(A) 98,0MHz 1kHz.±75kHz dév 60dB(Entrée ANT)	(B)	MODE: MONO 98,0MHz	T2	Distorsion minimale.	(b)
5	VCO	(A) 98,0MHz 0 dév 60dB(Entrée ANT)	Relier une résistance de 330kΩ à TP11. Raccorder un compteur de fréquence à une résistance par l'intermédiaire d'un voltmètre CA.	98,0MHz	VR1	19,00kHz	(c)
6	SEPARATION (E.T only)	(C) 98,0MHz 1kHz.±40kHz dév Selection:L Signal pilote: ±6,75kHz dév 60dB(Entrée ANT)	Rch	98,0MHz	VR2	Diaphonie minimale.	
SECTION MA Laisser l'antenne bouche MA installée. SELECTEUR: MW							
(1)	BORD DE BANDE (1)	—	Relier un voltmètre CC entre les TP1 et TP2(GND).	600kHz (603kHz)	L9	1,5V	(a)
(2)	BORD DE BANDE (2)	—	Relier un voltmètre CC entre les TP1 et TP2(GND).	1600kHz (1602kHz)	TC2	8,0V	(a)
Répéter les points (1) et (2) plusieurs fois.							
(3)	ALIGNEMENT HT (1)	(D) 630kHz 400Hz.30% mod	(B)	630kHz	L13	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(4)	ALIGNEMENT HT (2)	(D) 1440kHz 400Hz.30% mod	(B)	1440kHz	TC2	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (3) et (4) plusieurs fois.							
SECTION OL Laisser l'antenne bouche MA installée. SELECTEUR: LW							
(1)	BOAD DE BANDE (LW)(1)	—	Relier un voltmètre CC entre les TP1 et TP2(GND).	153kHz	L10	1,5V	(a)
(2)	BOAD DE BANDE (LW)(2)	—	Relier un voltmètre CC entre les TP1 et TP2(GND).	281kHz	TC5	8,0V	(a)
Répéter les points (1) et (2) plusieurs fois.							
(3)	ALIGNEMENT HT (LW)(1)	(D) 162kHz 400Hz.30% mod	(B)	162kHz	L12	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(4)	ALIGNEMENT HT (LW)(2)	(D) 270kHz 400Hz.30% mod	(B)	270kHz	TC4	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (3) et (4) plusieurs fois.							

ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPFANGSABTEILUNG Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: SELECTOR: FM MODE: FM MODE/MUTING ON							
1	BANDKANTE (1)	—	Einen Gleichspannungsmesser zwischen TP1 und TP2 anschließen.	87,5MHz	L7	2,5V	(a)
2	BANDKANTE (2)	—	Einen Gleichspannungsmesser zu TP5 anschließen.	108,0MHz	TC1	8,0V	(a)
Abstimmungen 1 und 2 mehrere Male wiederholen.							
3	HF-ABGLEICH	(A) 98,0MHz 1kHz, ±75kHz Hub	(B)	MODE: MONO 98,0MHz	L2.4.5	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
4	DISKRIMINATOR	(A) 98,0MHz 1kHz, ±75kHz Hub 60dB(ANT-Eingang)	(B)	MODE: MONO 98,0MHz	T2	Minimal Klirrfaktor.	(b)
5	SPANNUNGSGEREGLTER OSZILLATOR	(A) 98,0MHz 0 Hub 60dB(ANT-Eingang)	Einen 330kΩ Widerstand zu TP11 anschließen. Einen Frequenzzähler über einen Wechselspannungsmesser an den Widerstand anschließen.	98,0MHz	VR1	19,00kHz	(c)
6	STEREO KANALTRENNUNG (E.T only)	(C) 98,0MHz 1kHz, ±40kHz Hub Wähler: L Piloten: ±6,75kHz Hub 60dB(ANT-Eingang)	Rch	98,0MHz	VR2	Minimal Übersprechen.	
MW-EMPFANGSABTEILUNG Die MW-Rahmenantenne angebracht lassen. SELECTOR: MW							
(1)	BANDKANTE (1)	—	Einen Gleichspannungsmesser zwischen TP1 und TP2 anschließen.	600kHz (603kHz)	L9	1,5V	(a)
(2)	BANDKANTE (2)	—	Einen Gleichspannungsmesser zwischen TP1 und TP2 anschließen.	1600kHz (1602kHz)	TC3	8,0V	(a)
Abstimmungen (1) und (2) mehrere Male wiederholen.							
(3)	HF-ABGLEICH (1)	(D) 630kHz 400Hz, 30% mod	(B)	630kHz	L11	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(4)	HF-ABGLEICH (2)	(D) 1440kHz 400Hz, 30% mod	(B)	1440kHz	TC2	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (3) und (4) mehrere Male wiederholen.							
LW-EMPFANGSABTEILUNG Die MW-Rahmenantenne angebracht lassen. SELECTOR: LW							
(1)	BANDKANTE (LW)(1)	—	Einen Gleichspannungsmesser zwischen TP1 und TP2 anschließen.	153kHz	L10	1,5V	(a)
(2)	BANDKANTE (LW)(2)	—	Einen Gleichspannungsmesser zwischen TP1 und TP2 anschließen.	281kHz	TC5	8,0V	(a)
Abstimmungen (1) und (2) mehrere Male wiederholen.							
(3)	HF-ABGLEICH (LW)(1)	(D) 162kHz 400Hz, 30% mod	(B)	162kHz	L12	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(4)	HF-ABGLEICH (LW)(2)	(D) 270kHz 400Hz, 30% mod	(B)	270kHz	TC4	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (3) und (4) mehrere Male wiederholen.							

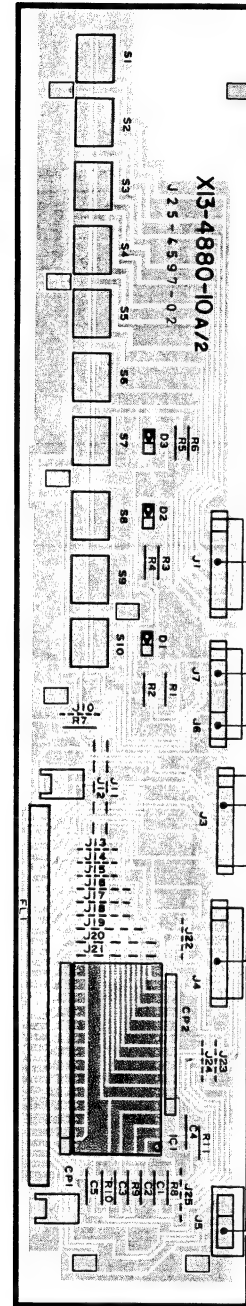
ADJUSTMENT



KT-34/L KT-34/L

PC BOARD

SUB(XI3-4880-10) Component side view
(X13-4880-10)



IC1

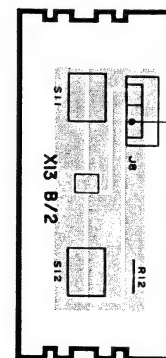
Pin	V
1	0
14	0
26	5

J3

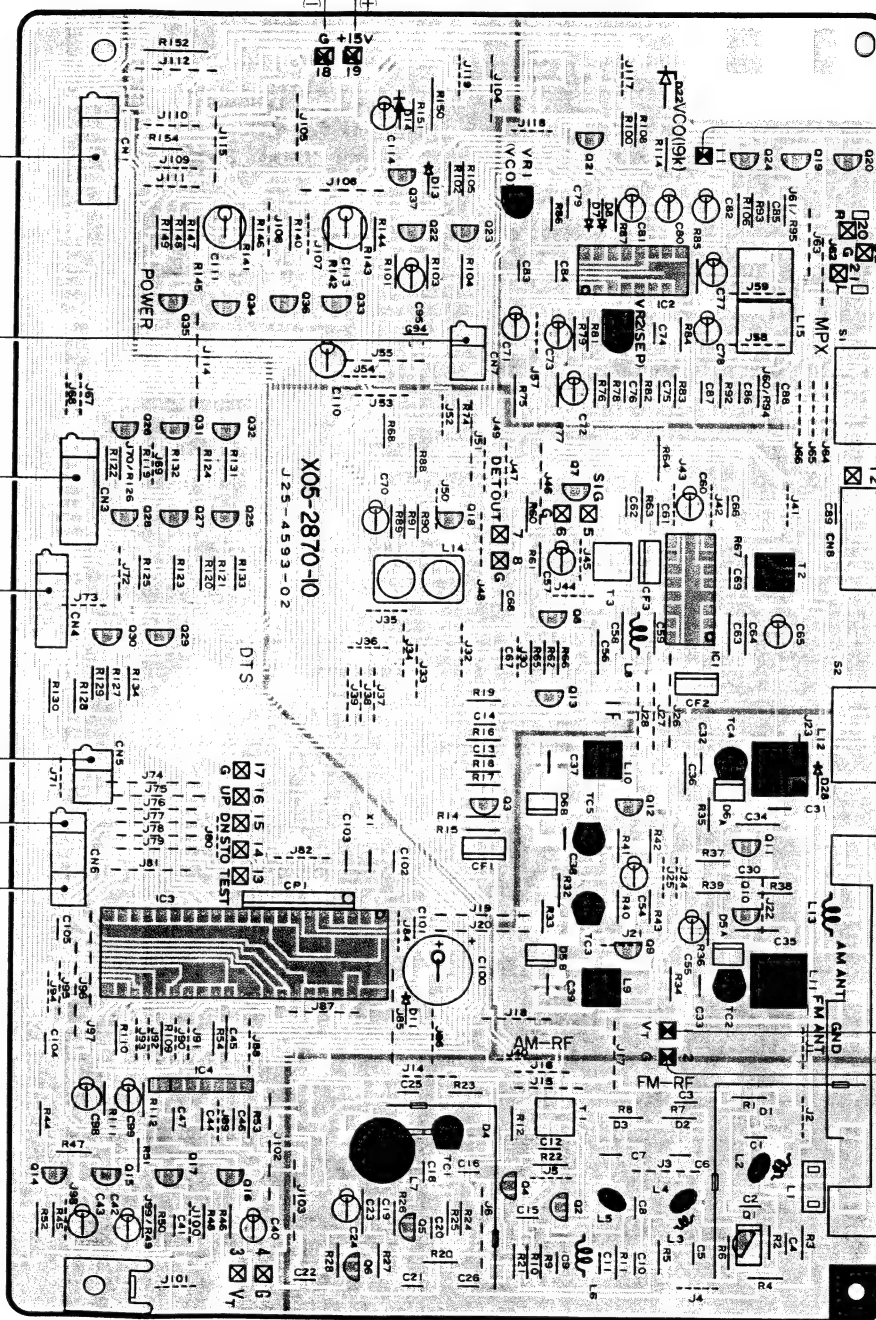
Pin	V
1	0
2	2.5
3	12
5	FM: 0 MW: 12
6	FM: 0 AM: 12
7	FM: 12 AM: 0

J7

Pin	V
1	12
2	ST: 10 MONO: 11.5
3	TUNED: 10 UNTUNED: 11.5



TUNER(X05-2870-10)
Component side view



IC1

Pin	V
1	1.4
2	1.4
3	1.4
4	0
5	5.3
6	5.3
7	0.7
8	1.5

IC2

Pin	V
9	AM: 1.8
10	AM: 1.1
11	1
12	5.3
13	AM: 1.3
14	AM: 1.3
15	2.2
16	2.2

IC3

Pin	V
1	11
2	2.6
3	6
4	8.8
5	8.8
6	4.1
7	4.1
8	0

IC4

Pin	V
9	0.6
10	2.5
11	2.5
12	2.5
13	1
14	2.5
15	3.2
16	0.6

Note: When not getting KA-34. Connect the DC power supply to the 18 (GND) and the 19 (+ 15 V) terminals.

(X05-2870-10)

Q1

Pin	V
S	0
D	11
G	0

Q2

Pin	V
E	1.5
C	12.3
B	2.1

Q3

Pin	V
E	1.1
C	10
B	1.8

Q21, 23

Pin	V
E	5.6
C	—
B	—

Q5

Pin	V
E	5.3
C	1.2
B	—

Q24

Pin	V
E	—
C	MUT ON: 0.7
B	—

Q6, 7, 8

Pin	V
E	0
C	—
B	—

Q26

Pin	V
E	12
C	FM: 0 MW: 12
B	—

Q13

Pin	V
E	0
C	1.5
B	—

Q31

Pin	V
E	12
C	FM: 12 AM: 0
B	—

Q16

Pin	V
E	0
C	—
B	0.6

Q33

Pin	V
E	12
C	—
B	—

Q17

Pin	V
E	0.6
C	—
B	1.1

Q34

Pin	V
E	12
C	15
B	—

Q25, 29, 30, 32

Pin	V
E	0
C	—
B	—

Q37

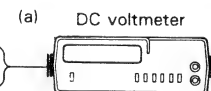
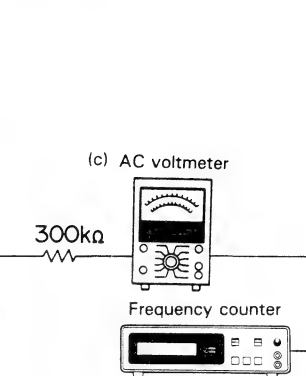
Pin	V
E	—
C	15
B	—

Q35

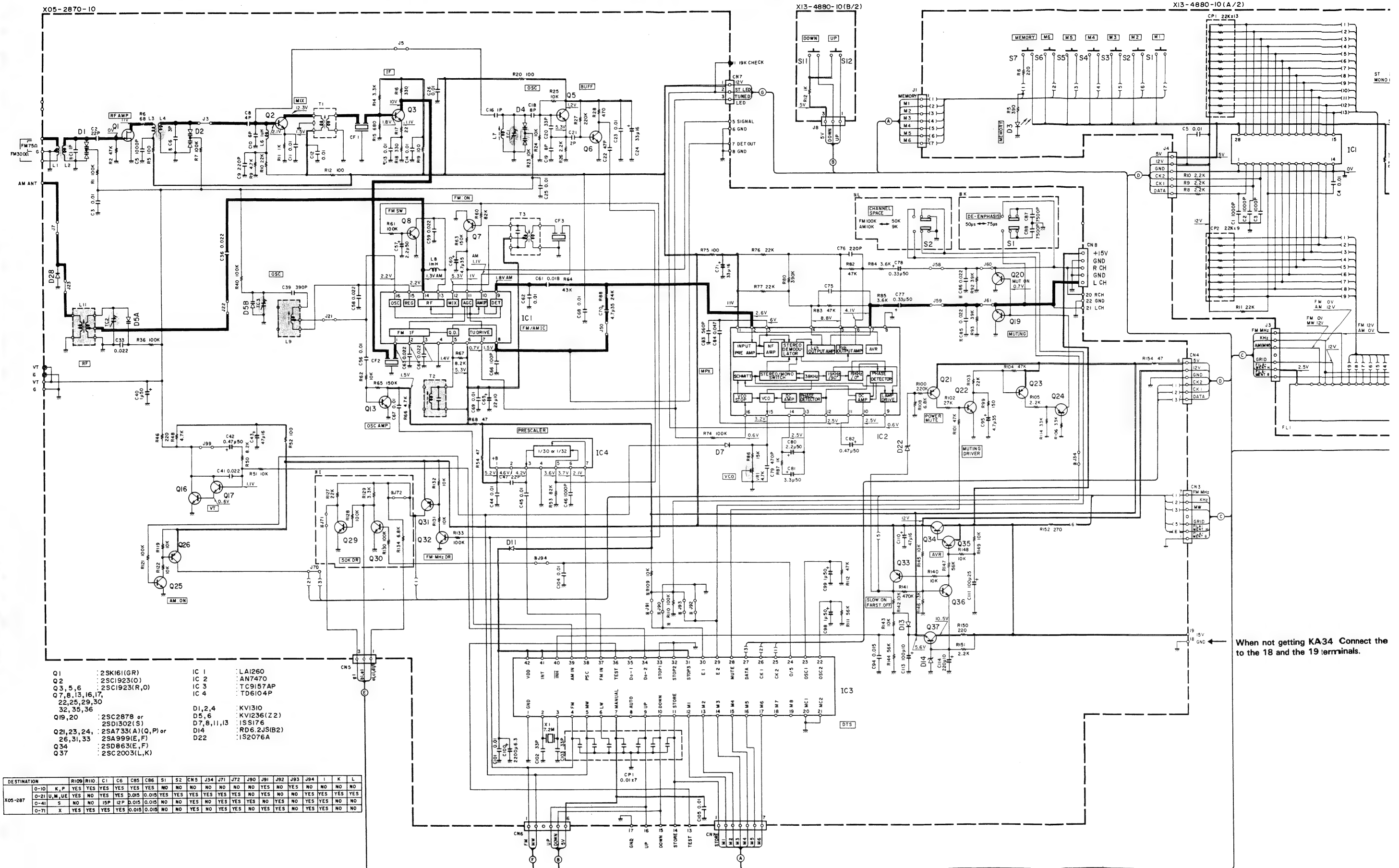
Pin	V
E	—
C	15
B	—

Q19, 20

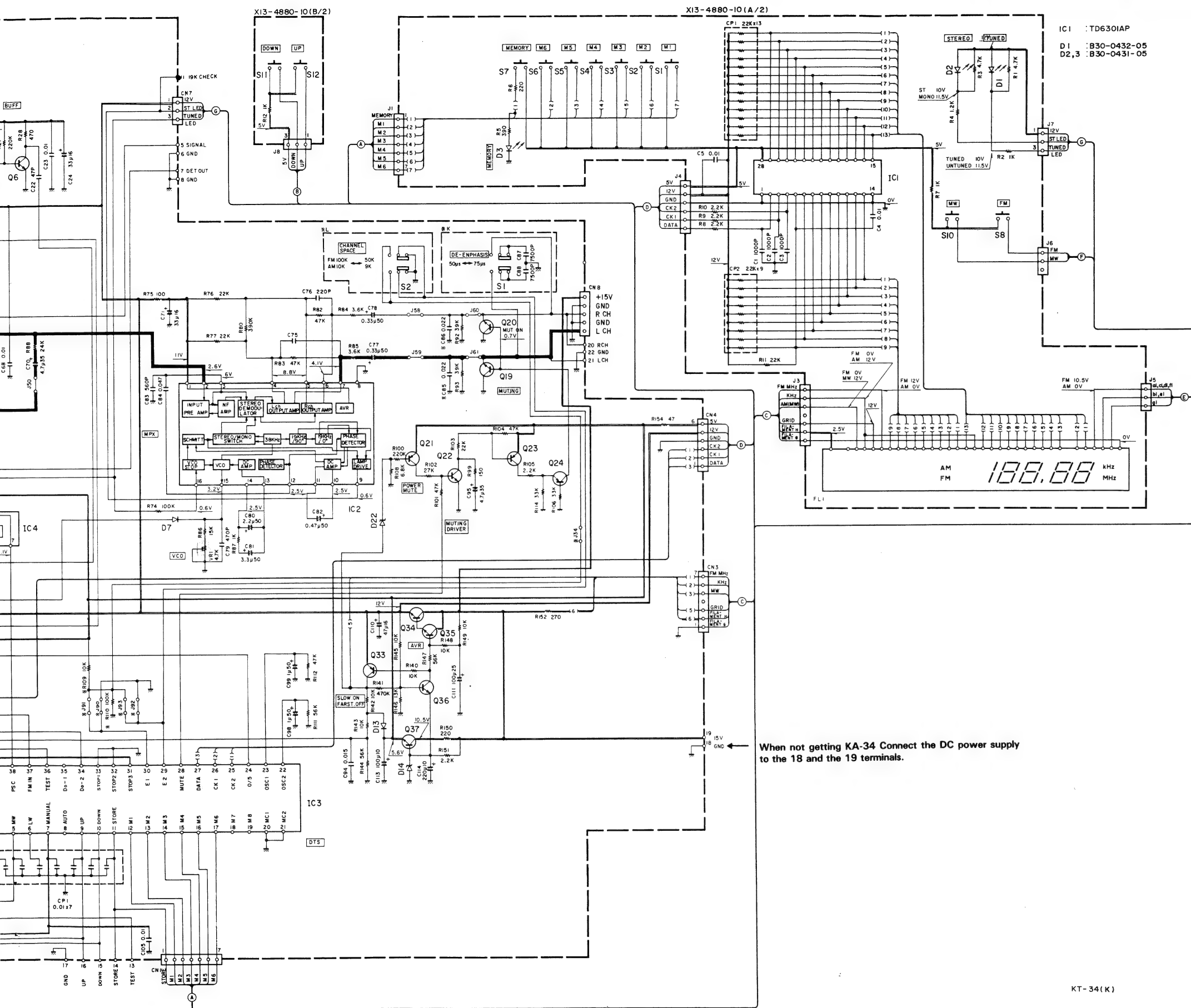
Pin	V
E	—
C	0
B	MUT ON: 0.7



Refer to the schematic diagram for the values of resistors and capacitors.
The PC board drawing is viewing from the side easy to check.

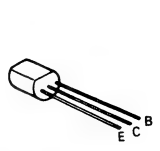


When not getting KA34 Connect the to the 18 and the 19 terminals.

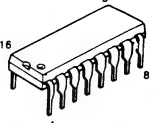


When not getting KA-34 Connect the DC power supply to the 18 and the 19 terminals.

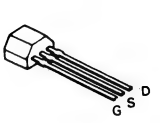
2SA733(A)
2SA999
2SC1923
2SC2003
2SC2878
2SD1302
2SD863



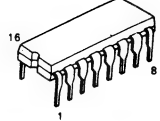
LA1260



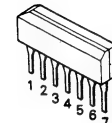
2SK161



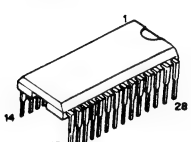
AN7470



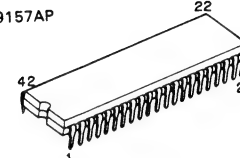
TD6104P



TD6301AP



TC9157AP



DC voltages are as measured with a high-impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels. Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig. Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

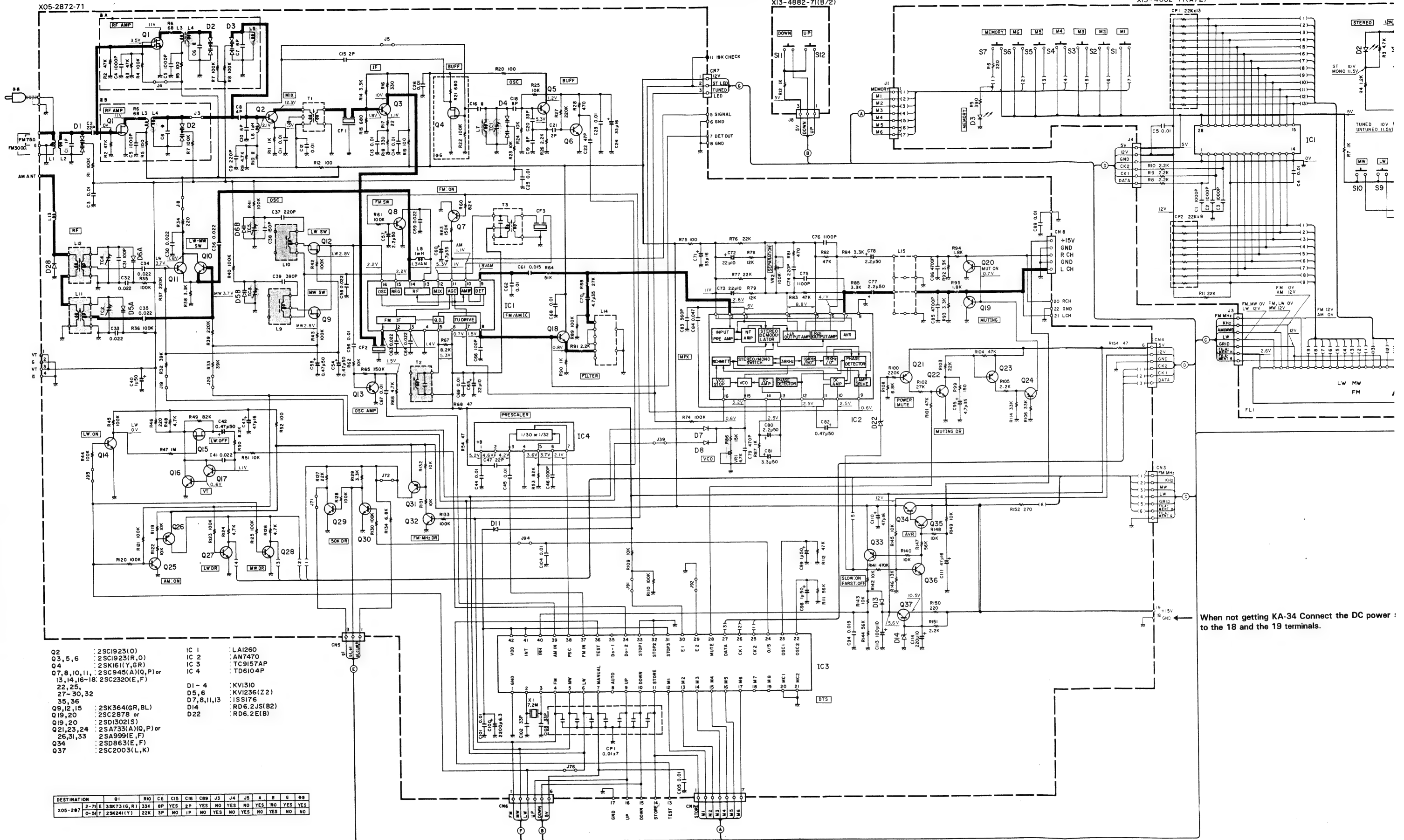
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

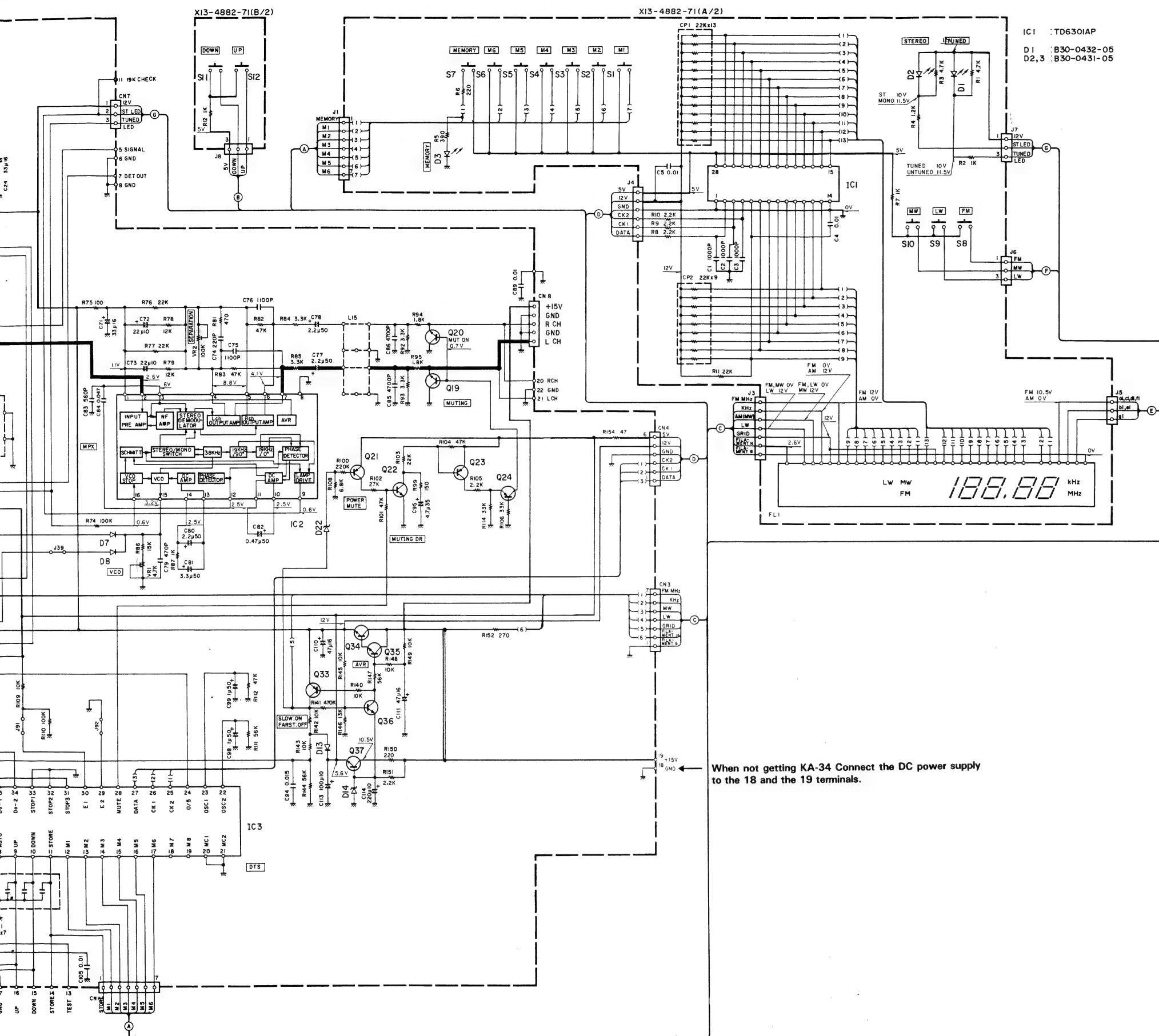
KT-34
KENWOOD

X05-2872-71

X13-4882-71(B/2)

X13-4882-71(A/2)





2SA733(A)
2SA999
2SC1923
2SC2003
2SC2320
2SC2878
2SC945(A)
2SD1302
2SD863

2SK364

3SK73

2SK161
2SK241

TD6104P

TD6301AP

LA1280


AN7470

TC9157AP

DC voltages are as measured with a high-impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels. Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

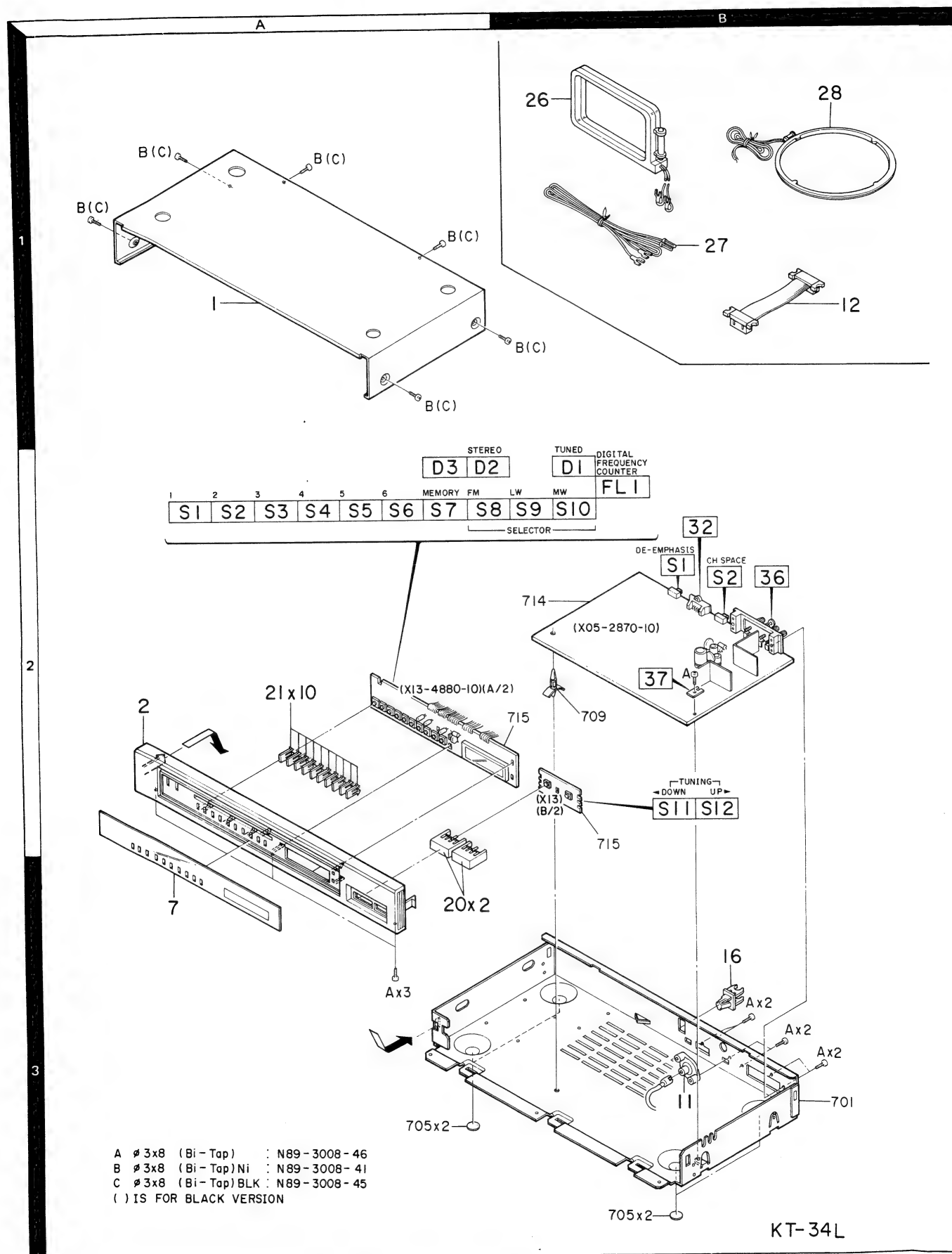
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig. Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

KT-34 (L)

KT-34L
KENWOOD

EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
KT-34 (Silver) Japan made						
1	1A	*	A01-1396-01	METALLIC CABINET		
2	2A	*	A20-4269-01	PANEL		
7	3A		B03-1752-03	DRESSING PLATE	KPUM	
7	3A		B03-1752-03	DRESSING PLATE	UESX	
7	3A		B03-1753-03	DRESSING PLATE	T	
7	3A		B03-1816-03	DRESSING PLATE	E	
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	UE	
-			B46-0095-03	WARRANTY CARD	UE	
-			B46-0096-03	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0123-03	WARRANTY CARD	T	
-			B50-5813-00	INSTRUCTION MANUAL (ENGLISH)	KPUM	
-			B50-5813-00	INSTRUCTION MANUAL (ENGLISH)	UESX	
-			B50-5814-00	INSTRUCTION MANUAL (FRENCH)	PMX	
-			B50-5815-00	INSTRUCTION MANUAL (SPANISH)	M	
-			B50-5816-00	INSTRUCTION MANUAL (ARABIC)	M	
-			B50-5817-00	INSTRUCTION MANUAL (ENGLISH)	T	
-			B50-5818-00	INSTRUCT MANUAL (E,F,G,D,SW,I)	E	
-			B58-0245-33	CAUTION CARD (FTZ)	E	
-			B58-0269-04	CAUTION CARD	K	
-			B59-0092-00	SERVICE DIRECTORY	UE	
11	3B		E04-0006-05	RF COAXIAL CABLE RECEPTACLE	E	
12	1B		E30-0973-05	CORD WITH CONNECTOR		
-		*	H01-5536-04	ITEM CARTON CASE	T	
-		*	H01-5537-04	ITEM CARTON CASE	E	
-		*	H01-5589-04	ITEM CARTON CASE	KPUM	
-		*	H01-5589-04	ITEM CARTON CASE	UESX	
-			H10-1797-02	POLYSTYRENE FOAMED FIXTURE		
-			H12-0192-04	PACKING FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350)		
-			H25-0232-04	PROTECTION BAG (235X350)		
16	3B		J19-0626-12	ANTENNA HOLDER		
20	3A	*	K27-1465-04	KNOB (BUTTON) DOWN, UP		
21	2A		K29-1940-04	KNOB (BUTTON) 1-6, MEMORY, SELECT		
26	1B		T90-0104-15	LOOP ANTENNA (AM)	KPUM	
26	1B		T90-0104-15	LOOP ANTENNA (AM)	UESX	
27	1B		T90-0132-05	T TYPE ANTENNA (FM)		
28	1B		T90-0138-05	LOOP ANTENNA (MW)	TE	
KT-34 (Silver) Singapore, France made						
1	1A	*	A01-1396-01	METALLIC CABINET	PTE	
2	2A	*	A20-4269-01	PANEL	PTE	
7	3A		B03-1752-03	DRESSING PLATE	P	
7	3A		B03-1753-03	DRESSING PLATE	T	
7	3A		B03-1816-03	DRESSING PLATE	E	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0123-03	WARRANTY CARD	T	

E: Scandinavia & Europe H: Audio Club K: USA

P: Canada

S: South Africa

T: England

U: PX (Far East, Hawaii)

UE: AAFES (Europe)

X: Australia

M: Other Areas

⚠ indicates safety critical components.

PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
—		*	B50-5819-00	INSTRUCTION MANUAL(ENGLISH)	P	
—		*	B50-5820-00	INSTRUCTION MANUAL(FRENCH)	P	
—		*	B50-5823-00	INSTRUCTION MANUAL(ENGLISH)	T	
—		*	B50-5824-00	INSTRUCT MANUAL(E,F,G,D,SW,I)	E	
—			B58-0245-33	CAUTION CARD (FTZ)	E	
11	3B		E04-0006-05	RF COAXIAL CABLE RECEPTACLE	E	
12	1B		E30-0973-05	CORD WITH CONNECTOR	PTE	
—		*	H01-5572-04	ITEM CARTON CASE	P	
—		*	H01-5573-04	ITEM CARTON CASE	T	
—		*	H01-5574-04	ITEM CARTON CASE	E	
—		*	H10-1810-02	POLYSTYRENE FOAMED FIXTURE	PTE	
—		*	H12-0192-04	PACKING FIXTURE	PTE	
—			H25-0078-04	PROTECTION BAG	PTE	
—			H25-0223-04	PROTECTION BAG (750X350)	PTE	
16	3B		J19-0564-05	ANTENNA HOLDER	PTE	
20	3A	*	K27-1465-04	KNOB(BUTTON) DOWN,UP	PTE	
21	2A		K29-1940-04	KNOB(BUTTON) 1-6,MEMORY,SELECT	PTE	
26	1B		T90-0104-15	LOOP ANTENNA (AM)	P	
27	1B		T90-0121-05	T TYPE ANTENNA (FM)	PTE	
28	1B		T90-0138-05	LOOP ANTENNA (MW)	TE	
KT-34 (Black) Japan made						
1	1A		A01-1395-01	METALLIC CABINET		
2	2A	*	A20-4268-01	PANEL		
7	3A	*	B03-1752-03	DRESSING PLATE	KPUM	
7	3A	*	B03-1752-03	DRESSING PLATE	UESX	
7	3A	*	B03-1753-03	DRESSING PLATE	T	
7	3A	*	B03-1816-03	DRESSING PLATE	E	
—			B46-0092-03	WARRANTY CARD	K	
—			B46-0094-03	WARRANTY CARD	UE	
—			B46-0095-03	WARRANTY CARD	UE	
—			B46-0096-03	WARRANTY CARD	X	
—			B46-0121-03	WARRANTY CARD	P	
—			B46-0122-13	WARRANTY CARD	E	
—			B46-0123-03	WARRANTY CARD	T	
—		*	B50-5813-00	INSTRUCTION MANUAL(ENGLISH)	KPUM	
—		*	B50-5813-00	INSTRUCTION MANUAL(ENGLISH)	UESX	
—		*	B50-5814-00	INSTRUCTION MANUAL(FRENCH)	PMX	
—		*	B50-5815-00	INSTRUCTION MANUAL(SPANISH)	M	
—		*	B50-5816-00	INSTRUCTION MANUAL(ARABIC)	M	
—		*	B50-5817-00	INSTRUCTION MANUAL(ENGLISH)	T	
—		*	B50-5818-00	INSTRUCT MANUAL(E,F,G,D,SW,I)	E	
—			B58-0245-33	CAUTION CARD (FTZ)	E	
—			B58-0269-04	CAUTION CARD	K	
—			B59-0092-00	SERVICE DIRECTORY	UE	
11	3B		E04-0006-05	RF COAXIAL CABLE RECEPTACLE	E	
12	1B		E30-0973-05	CORD WITH CONNECTOR		
—		*	H01-5533-04	ITEM CARTON CASE	E	
—		*	H01-5534-04	ITEM CARTON CASE	T	
—		*	H01-5588-04	ITEM CARTON CASE	KPUM	
—		*	H01-5588-04	ITEM CARTON CASE	UESX	
—			H10-1797-02	POLYSTYRENE FOAMED FIXTURE		

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--			H12-0192-04	PACKING FIXTURE		
--			H25-0223-04	PROTECTION BAG (750X350)		
--			H25-0232-04	PROTECTION BAG (235X350)		
16	3B		J19-0626-12	ANTENNA HOLDER		
20	3A		K27-1446-04	KNØB(BUTTON) DOWN,UP		
21	2A		K29-1940-04	KNØB(BUTTON) 1-6, MEMORY, SELECT		
26	1B		T90-0104-15	LOOP ANTENNA (AM)	KPUM	
26	1B		T90-0104-15	LOOP ANTENNA (AM)	UESX	
27	1B		T90-0132-05	T TYPE ANTENNA (FM)		
28	1B		T90-0138-05	LOOP ANTENNA (MW)	TE	
KT-34 (Black) Singapore, France made						
1	1A		A01-1395-01	METALLIC CABINET	PTE	
2	2A	*	A20-4268-01	PANEL	PTE	
7	3A	*	B03-1752-03	DRESSING PLATE	P	
7	3A	*	B03-1753-03	DRESSING PLATE	T	
7	3A	*	B03-1816-03	DRESSING PLATE	E	
--			B46-0121-03	WARRANTY CARD	P	
--			B46-0122-13	WARRANTY CARD	E	
--			B46-0123-03	WARRANTY CARD	T	
--		*	B50-5819-00	INSTRUCTION MANUAL(ENGLISH)	P	
--		*	B50-5820-00	INSTRUCTION MANUAL(FRENCH)	P	
--		*	B50-5823-00	INSTRUCTION MANUAL(ENGLISH)	T	
--		*	B50-5824-00	INSTRUCT MANUAL(E,F,G,D,SW,I)	E	
--			B58-0245-33	CAUTION CARD (FTZ)	E	
11	3B		E04-0006-05	RF COAXIAL CABLE RECEPTACLE	E	
12	1B		E30-0973-05	CORD WITH CONNECTOR	PTE	
--		*	H01-5563-04	ITEM CARTON CASE	P	
--		*	H01-5564-04	ITEM CARTON CASE	T	
--		*	H01-5565-04	ITEM CARTON CASE	E	
--		*	H10-1810-02	POLYSTYRENE FOAMED FIXTURE	PTE	
--			H12-0192-04	PACKING FIXTURE	PTE	
--			H25-0078-04	PROTECTION BAG	PTE	
--			H25-0223-04	PROTECTION BAG (750X350)	PTE	
16	3B		J19-0564-05	ANTENNA HOLDER	PTE	
20	3A		K27-1446-04	KNØB(BUTTON) DOWN,UP	PTE	
21	2A		K29-1940-04	KNØB(BUTTON) 1-6, MEMORY, SELECT	PTE	
26	1B		T90-0104-15	LOOP ANTENNA (AM)	P	
27	1B		T90-0121-05	T TYPE ANTENNA (FM)	PTE	
28	1B		T90-0138-05	LOOP ANTENNA (MW)	TE	
TUNER (X05-2870-10, X05-2880-10)						
C1			CC45FSL1H010C	CERAMIC 1.0PF C	KPUM	
C1			CC45FSL1H010C	CERAMIC 1.0PF C	UEXTE	
C1			CC45FSL1H150J	CERAMIC 15PF J	S	
C2			CC45FSL1H220J	CERAMIC 22PF J		
C3			CK45FF1H103Z	CERAMIC 0.010UF Z		
C4	.5		CK45FB1H102K	CERAMIC 1000PF K	E	
C5			CK45FB1H102K	CERAMIC 1000PF K	KPUM	
C5			CK45FB1H102K	CERAMIC 1000PF K	UESXT	
C6			CC45FSL1H030C	CERAMIC 3.0PF C	KPUM	
C6			CC45FSL1H030C	CERAMIC 3.0PF C	UEXT	

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Remarks:

J: X05-2870-10

S: X05-2880-10

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C6			CC45FSL1H080D	CERAMIC 8.0PF D	E	
C6			CC45FSL1H120J	CERAMIC 12PF J	S	
C7			CC45FSL1H060D	CERAMIC 6.0PF D	E	
C8			CC45FSL1H040C	CERAMIC 4.0PF C		
C9			CC45FSL1H221J	CERAMIC 220PF J		
C10			CC45FSL1H060D	CERAMIC 6.0PF D		
C11 -14			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
C15 ,16			CC45FSL1H020C	CERAMIC 2.0PF C	KPUM	
C16			CC45FSL1H010C	CERAMIC 1.0PF C	UESXT	
C16			CC45FSL1H010C	CERAMIC 1.0PF C		
C18 ,19			CC45FSL1H080D	CERAMIC 8.0PF D		
C20			CC45FSL1H330J	CERAMIC 33PF J		
C21			CC45FSL1H020C	CERAMIC 2.0PF C		
C22			CC45FSL1H470J	CERAMIC 47PF J		
C23			C91-0769-05	CERAMIC 0.01UF M		
C24			CE04FW1C330M	ELECTR0 33UF 16WV		
C25 ,26			CK45FF1H103Z	CERAMIC 0.010UF Z	TE	
C30			C91-0085-05	CERAMIC 0.022UF N	TE	
C31			CC45FTH1H101J	CERAMIC 100PF J	TE	
C32 ,33			CK45FF1H223Z	CERAMIC 0.022UF Z	TE	
C33			CK45FF1H223Z	CERAMIC 0.022UF Z	KPUM	
C33			CK45FF1H223Z	CERAMIC 0.022UF Z	UESX	
C34 -36			C91-0085-05	CERAMIC 0.022UF N	TE	
C36			C91-0085-05	CERAMIC 0.022UF N	KPUM	
C36			C91-0085-05	CERAMIC 0.022UF N	UESX	
C37			CD09FS1H221JY0	POLYSTY 220PF J	TE	
C38			CC45FCH1H151J	CERAMIC 150PF J	TE	
C39			CD09FS1H391JY0	POLYSTY 390PF J		
C40			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C41			CK45FF1H223Z	CERAMIC 0.022UF Z		
C42			CE04FW1HR47M	ELECTR0 0.47UF 50WV		
C43			CE04FW1C470M	ELECTR0 47UF 16WV		
C44			CK45FF1H103Z	CERAMIC 0.010UF Z		
C45			C91-0769-05	CERAMIC 0.01UF M		
C46			CK45FB1H102K	CERAMIC 1000PF K		
C47			CC45FSL1H220J	CERAMIC 22PF J		
C54 ,55			CE04FW1HR47M	ELECTR0 0.47UF 50WV	TE	
C56			C91-0769-05	CERAMIC 0.01UF M		
C57			CE04FW1H2R2M	ELECTR0 2.2UF 50WV		
C58 ,59			C91-0085-05	CERAMIC 0.022UF N		
C60			CE04FW1V4R7M	ELECTR0 4.7UF 35WV		
C61			CF92FV1H153J	MF 0.015UF J	TE	
C61			CF92FV1H183J	MF 0.018UF J	KPUM	
C61			CF92FV1H183J	MF 0.018UF J	UESX	
C62			CK45FF1H103Z	CERAMIC 0.010UF Z		
C63 ,64			C91-0085-05	CERAMIC 0.022UF N		
C65			CE04FW1A220M	ELECTR0 22UF 10WV		
C66			CC45FSL1H101J	CERAMIC 100PF J		
C67 -69			CK45FF1H103Z	CERAMIC 0.010UF Z		
C70			CE04FW1V4R7M	ELECTR0 4.7UF 35WV		
C71			CE04FW1C330M	ELECTR0 33UF 16WV		
C72 ,73			CE04FW1A220M	ELECTR0 22UF 10WV	TE	
C74			CC45FSL1H221J	CERAMIC 220PF J	TE	
C75 ,76			CC45FSL1H221J	CERAMIC 220PF J	KPUM	
C75 ,76			CC45FSL1H221J	CERAMIC 220PF J	UESX	

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Remarks:

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C75 ,76 C77 ,78 C77 ,78 C77 ,78 C79			CF92FV1H112J CE04FW1HR33M CE04FW1HR33M CE04FW1H2R2M C009FS1H471JY0	MF 1100PF J ELECTR0 0.33UF 50WV ELECTR0 0.33UF 50WV ELECTR0 2.2UF 50WV POLYSTY 470PF J	TE KPUM UESX TE	
C80 C81 C82 C83 C84			CE04FW1H2R2M CE04FW1H3R3M CE04FW1HR47M CK45FB1H561K CF92FV1H473J	ELECTR0 2.2UF 50WV ELECTR0 3.3UF 50WV ELECTR0 0.47UF 50WV CERAMIC 560PF K MF 0.047UF J		
C85 ,86 C85 ,86 C85 ,86 C85 ,86 C87 ,88			CF92FV1H153J CF92FV1H153J CF92FV1H223J CF92FV1H472J CF92FV1H752J	MF 0.015UF J MF 0.015UF J MF 0.022UF J MF 4700PF J MF 7500PF J	UMUES X KP TE UMUE	
C89 C94 C95 C98 ,99 C100			CK45F1H103Z CF92FV1H153J CE04FW1V4R7M CE04FW1H010M CE04FW0J222M	CERAMIC 0.010UF Z MF 0.015UF J ELECTR0 4.7UF 35WV ELECTR0 1.0UF 50WV ELECTR0 2200UF 6.3WV	E	
C101 C102,103 C104,105 C110,111 C113			CK45FF1H103Z CC45FCH1H330J CK45FF1H103Z CE04FW1C470M CE04FW1A101M	CERAMIC 0.010UF Z CERAMIC 33PF J CERAMIC 0.010UF Z ELECTR0 47UF 16WV ELECTR0 100UF 10WV		
C114 TC1 TC2 ,3 TC4 ,5			CE04FW1A221M C05-0302-05 C05-0303-05 C05-0097-05	ELECTR0 220UF 10WV CERAMIC TRIMMER CAPACITOR(11PF CERAMIC TRIMMER CAPACITOR(20PF CERAMIC TRIMMER CAPACITOR(30PF	TE	
32 36 37	2B 2B 2B		E08-0503-05 E20-0452-05 E23-0125-05	RECTANGULAR RECEPTACLE (AMP) SCREW TERMINAL BOARD(4P)ANT TERMINAL (GND)		
CF1 CF1 ,2 CF1 ,2 CF2 CF3			L72-0190-05 L72-0140-05 L72-0140-05 L72-0195-05 L72-0099-05	CERAMIC FILTER CERAMIC FILTER CERAMIC FILTER CERAMIC FILTER CERAMIC FILTER	TE KPUM UESX TE	
L1 L2 L2 L2 L3			L31-0518-05 L31-0520-05 L31-0520-05 L31-0530-05 L31-0527-05	FM-RF COIL FM-RF COIL FM-RF COIL FM-RF COIL FM-RF COIL	KPUM UEXTES	
L4 L4 L4 L5 L6			L31-0514-05 L31-0514-05 L31-0521-05 L31-0529-05 L40-1092-14	FM-RF COIL FM-RF COIL FM-RF COIL FM-RF COIL SMALL FIXED INDUCTOR(1.0UH,M)	KPUM UEXTES E	
L7 L7 L7 L8 L9			L32-0270-05 L32-0270-05 L32-0317-05 L40-1021-14 L32-0277-15	FM OSCILLATING COIL FM OSCILLATING COIL FM OSCILLATING COIL SMALL FIXED INDUCTOR(1.0MH,K) MW OSCILLATING COIL	KPUM UEXTES	
L10 L11			L32-0288-05 L31-0509-05	LW OSCILLATING COIL MW-RF COIL	TE	

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L12 L13 L14 L15 T1			L31-0499-05 L40-1092-14 L79-0125-05 L79-0154-05 L30-0427-05	LW-RF COIL SMALL FIXED INDUCTOR(1.0UH,M) LC FILTER LC FILTER FM IFT	TE TE TE	
T2 T3 X1			L30-0428-05 L30-0362-05 L77-0578-05	FM IFT AM IFT CRYSTAL RESONATOR(7.2MHZ)		
CP1 R5 R12 R20 R52			R90-0546-05 RD14AB2E101J RD14AB2E101J RD14AB2E101J RD14AB2E101J	MULTI-COMP 0.1UFx4 FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W	KPXTE KPXTE KPXTE KPXTE	
R75 R150 R152 VR1 VR1		*	RD14AB2E101J RS14DB3A221J RS14DB3D301J R12-1069-05 R12-2305-05	FL-PROOF RD 100 J 1/4W FL-PROOF RS 220 J 1W FL-PROOF RS 300 J 2W TRIMMING PQT. (4.7K) VCO TRIMMING PQT. (5K) VCO	KPXTE	J S
VR2 VR2 VR2			R12-5046-05 R12-5309-05 R12-7017-05	TRIMMING PQT. (100K) SEPARATION TRIMMING PQT. (100K) SEPARATION TRIMMING PQT. (500K) SEPARATION	TE TE P	J S S
S1 ,2	2B		S31-2094-05	SLIDE SWITCH(DE-EMPH,CH SPACE)	UMUE	
D1 -4 D1 ,2 D1 ,2 D4 D4			KV1310-4 KV1310-3 KV1310-3 KV1310-3 KV1310-3	VARIABLE CAPACITANCE DIODE VARIABLE CAPACITANCE DIODE VARIABLE CAPACITANCE DIODE VARIABLE CAPACITANCE DIODE VARIABLE CAPACITANCE DIODE	E KPUM UESXT KPUM UESXT	
D5 D5 D5 ,6 D7 D7			KV1236(Z2) KV1236(Z2) KV1236(Z2) 1SS176 1SS176	VARIABLE CAPACITANCE DIODE VARIABLE CAPACITANCE DIODE VARIABLE CAPACITANCE DIODE DIODE DIODE	KPUM UESX TE KPUM UESX	
D7 ,8 D11 D12 D13 D14			1SS176 1SS176 RD5.1E(B) 1SS176 RD6.2JS(B2)	DIODE DIODE ZENER DIODE DIODE ZENER DIODE	TE	
D22 D27 ,28 IC1 IC2 IC3			RD6.2E(B) 1SS176 LA1260 AN7470 TC9157AP	ZENER DIODE DIODE IC(FM/AM TUNER) IC(FM MPX) IC(DIGITAL TUNING SYSTEM)		
IC4 Q1 Q1 Q1 Q1			TD6104P 2SK161(GR) 2SK161(GR) 2SK241(Y) 3SK73(GR)	IC(PRE SCALER) FET FET FET FET	KPUM UESX T E	
Q2 Q3 Q4 Q5 ,6 Q8 Q8			2SC1923(Q) 2SC1923(R,Q) 2SK161(Y,GR) 2SC1923(R,Q) 2SC2320(E,F) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR FET TRANSISTOR TRANSISTOR TRANSISTOR	E	

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Q9			2SK364 (GR,BL)	FET	TE	
Q10 ,11			2SC2320 (E,F)	TRANSISTOR	TE	
Q10 ,11			2SC945 (A) (Q,P)	TRANSISTOR	TE	
Q12			2SK364 (GR,BL)	FET	TE	
Q13			2SC2320 (E,F)	TRANSISTOR		
Q13			2SC945 (A) (Q,P)	TRANSISTOR		
Q14			2SC2320 (E,F)	TRANSISTOR	TE	
Q14			2SC945 (A) (Q,P)	TRANSISTOR	TE	
Q15			2SK364 (GR,BL)	FET	TE	
Q16 ,17			2SC2320 (E,F)	TRANSISTOR		
Q16 ,17			2SC945 (A) (Q,P)	TRANSISTOR		
Q18			2SC2320 (E,F)	TRANSISTOR	TE	
Q18			2SC945 (A) (Q,P)	TRANSISTOR	TE	
Q19 ,20			2SC2878	TRANSISTOR		
Q19 ,20			2SD1302 (S)	TRANSISTOR		
Q21			2SA733 (A) (Q,P)	TRANSISTOR		
Q21			2SA999 (E,F)	TRANSISTOR		
Q22			2SC2320 (E,F)	TRANSISTOR		
Q22			2SC945 (A) (Q,P)	TRANSISTOR		
Q23 ,24			2SA733 (A) (Q,P)	TRANSISTOR		
Q23 ,24			2SA999 (E,F)	TRANSISTOR		
Q25			2SC2320 (E,F)	TRANSISTOR		
Q25			2SC945 (A) (Q,P)	TRANSISTOR		
Q26			2SA733 (A) (Q,P)	TRANSISTOR		
Q26			2SA999 (E,F)	TRANSISTOR		
Q27 ,28			2SC2320 (E,F)	TRANSISTOR	TE	
Q27 ,28			2SC945 (A) (Q,P)	TRANSISTOR	TE	
Q29 ,30			2SC2320 (E,F)	TRANSISTOR	UMUES	
Q29 ,30			2SC2320 (E,F)	TRANSISTOR	XTE	
Q29 ,30			2SC945 (A) (Q,P)	TRANSISTOR	UMUES	
Q29 ,30			2SC945 (A) (Q,P)	TRANSISTOR	XTE	
Q31			2SA733 (A) (Q,P)	TRANSISTOR		
Q31			2SA999 (E,F)	TRANSISTOR		
Q32			2SC2320 (E,F)	TRANSISTOR		
Q32			2SC945 (A) (Q,P)	TRANSISTOR		
Q33			2SA733 (A) (Q,P)	TRANSISTOR		
Q33			2SA999 (E,F)	TRANSISTOR		
Q34			2SD863 (E,F)	TRANSISTOR		
Q35 ,36			2SC2320 (E,F)	TRANSISTOR		
Q35 ,36			2SC945 (A) (Q,P)	TRANSISTOR		
Q37			2SC2003 (L,K)	TRANSISTOR		
D1	2B		B30-0432-05	LED (LN31GCPH(U)) TUNED		
D2 ,3	2A,2B		B30-0431-05	LED (LN21CPH) STEREO, MEMORY		
C1 -3			C91-0757-05	CERAMIC 0.001UF K		
C4 ,5			C91-0769-05	CERAMIC 0.01UF M		
CP1			R90-0443-05	MULTI-COMP 22KX13 J 1/6W		
CP2			R90-0442-05	MULTI-COMP 22KX9 J 1/6W		
S1 -12	2A,2B		S40-1064-05	PUSH SWITCH (1-6, MEM, SEL, TUNING)	TE	
S1 -8	2A		S40-1064-05	PUSH SWITCH (1-6, MEMORY, FM)	KPUM	
S1 -8	2A		S40-1064-05	PUSH SWITCH (1-6, MEMORY, FM)	UESX	
S10 -12	2B		S40-1064-05	PUSH SWITCH (MW, DOWN, UP)	KPUM	
S10 -12	2B		S40-1064-05	PUSH SWITCH (MW, DOWN, UP)	UESX	

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Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
FL1 FL1 FL1 IC1	2B 2B 2B		7-BT-20ZK 7-BT-20ZK 7-BT-22ZK TD6301AP	FLUORESCENT INDICATOR TUBE FLUORESCENT INDICATOR TUBE FLUORESCENT INDICATOR TUBE IC (FL/LED/LCD FREQ DISPLAY DR)	KPUM UESX TE	

E: Scandinavia & Europe H: Audio Club K: USA

P: Canada

S: South Africa

T: England

U: PX (Far East, Hawaii)

UE: AAFES (Europe)

X: Australia

-M: Other Areas

Remarks:

J: X05-2870-10

S: X05-2880-10

⚠ indicates safety critical components.

PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
FL1	2B		7-BT-20ZK	FLUORESCENT INDICATOR TUBE	KPUM	
FL1	2B		7-BT-20ZK	FLUORESCENT INDICATOR TUBE	UESX	
FL1	2B		7-BT-22ZK	FLUORESCENT INDICATOR TUBE	TE	
IC1			TD6301AF	IC (FL/LED/LCD FREQ DISPLAY DR)		

E: Scandinavia & Europe H: Audio Club K: USA P: Canada
 S: South Africa T: England U: PX (Far East, Hawaii)
 UE: AAFES (Europe) X: Australia M: Other Areas

Remarks:

J: X05-2870-10

S: X05-2880-10

⚠ indicates safety critical components.

SPECIFICATIONS

KT-34

[FM tuner section]

Usable sensitivity	10.8 dBf (0.95 μ V)
50dB quieting sensitivity	
Mono	14.5 dBf (3 μ V)
Stereo	37.2 dBf (40 μ V)
Signal to noise ratio	
Mono	70 dB at 65 dBf, 70 dB at 85 dBf
Stereo	64 dB at 65 dBf, 64 dB at 85 dBf
Total harmonic distortion	
Mono: 100 Hz	0.3%
1 kHz	0.3%
50 Hz ~ 10 kHz	0.6%
Stereo: 100 Hz	0.4%
1 kHz	0.4%
50 Hz ~ 10 kHz	0.9%
Capture ratio	2.0 dB
Alternate channel selectivity	50 dB
Stereo separation	
1 kHz	45 dB
50 Hz ~ 10 kHz	35 dB
Frequency response	30 Hz to 15 kHz +0.5 dB, -2.5 dB
Spurious rejection ratio	75 dB
Image rejection ratio	40 dB
IF rejection ratio	90 dB
AM suppression ratio	55 dB
Subcarrier suppression ratio	35 dB
FM frequency range	87.5 MHz to 108 MHz

[AM tuner section]

Usable sensitivity	20 μ V, 400 μ V/m
Signal to noise ratio	50 dB
Total harmonic distortion	0.6%
Image rejection	35 dB
Selectivity	25 dB
IF rejection ratio	50 dB

[General]

Dimensions	W: 420 mm (16-9/16") H: 63 mm (2-1/2") D: 227 mm (8-15/16")
Weight (Net)	1.5 kg (3.3 lb)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

KT34-L

[FM tuner section]

Sensitivity at 75 ohms	
Mono: S/N 26 dB, 40 kHz dev.	0.7 μ V
Stereo: S/N 46 dB, 46 kHz dev.	25.0 μ V
Limiting level	
-3 dB point, 40 kHz dev.	0.5 μ V
Frequency response	30 Hz ~ 15 kHz, +0.5 dB, -2.5 dB
Total harmonic distortion	
Mono: 1 kHz, 40 kHz dev.	0.3%
Stereo: 1 kHz, 46 kHz dev.	0.8%
S/N weighted (IEC-A)	
Mono: 40 kHz dev., 1 mV input	60.0 dB
Stereo: 46 kHz dev., 1 mV input	60.0 dB
S/N unweighted	
Mono: 40 kHz dev., 1 mV input	60.0 dB
Stereo: 46 kHz dev., 1 mV input	60.0 dB
FM stereo separation: 1 mV input	
250 Hz	38 dB
1 kHz	40 dB
6.3 kHz	35 dB
12.5 kHz	24 dB
Image rejection ratio	76 dB
IF rejection ratio	90 dB
AM suppression ratio	55 dB
Spurious rejection ratio	80 dB
Capture ratio	2.5 dB
Subcarrier suppression	
19 kHz: 46 kHz dev.	56 dB
38 kHz: 46 kHz dev.	65 dB
Alternate channel selectivity	
\pm 300 kHz	70 dB

[MW tuner section]

Usable sensitivity	20 μ V
S/N ratio: 1 mV input	50 dB
Image rejection ratio	35 dB
Total harmonic distortion	0.6%
Selectivity	25 dB

[LW tuner section]

Usable sensitivity	20 μ V
S/N ratio: 1 mV input	50 dB
Image rejection ratio	48 dB
Total harmonic distortion	0.6%
Selectivity	35 dB

[General]

Dimensions (W x H x D)	420 x 63 x 227 mm
Weight (Net)	1.5 kg

TRIO-KENWOOD CORPORATION

Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD ELECTRONICS
DIVISION OF KENWOOD U.S.A. CORPORATION
1315 E. Watsoncenter Rd., Carson, California 90745, U.S.A.
75 Seaview Drive, Secaucus, New Jersey 07094, U.S.A.

TRIO-KENWOOD CANADA INC.,
1070 Jayson Court, Mississauga, Ontario, Canada L4W 2V5

TRIO-KENWOOD ELECTRONICS, N.V.
Leuvensesteenweg 504 B-1930 Zaventem, Belgium

TRIO-KENWOOD ELECTRONICS GmbH
Rembrücker Str. 15, 6056 Heusenstamm, West Germany

TRIO-KENWOOD FRANCE S.A.
5, Boulevard Ney, 75018 Paris, France

TRIO-KENWOOD (AUSTRALIA) PTY. LTD. (INCORPORATED IN N.S.W.)
4E Woodcock Place, Lane Cove, N.S.W. 2066, Australia

KENWOOD & LEE ELECTRONICS, LTD.
Wang Kee Building, 5th Floor, 34-37, Connaught Road, Central, Hong Kong